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ANNUAL SPECIAL ISSUE

JUNE 24 1961



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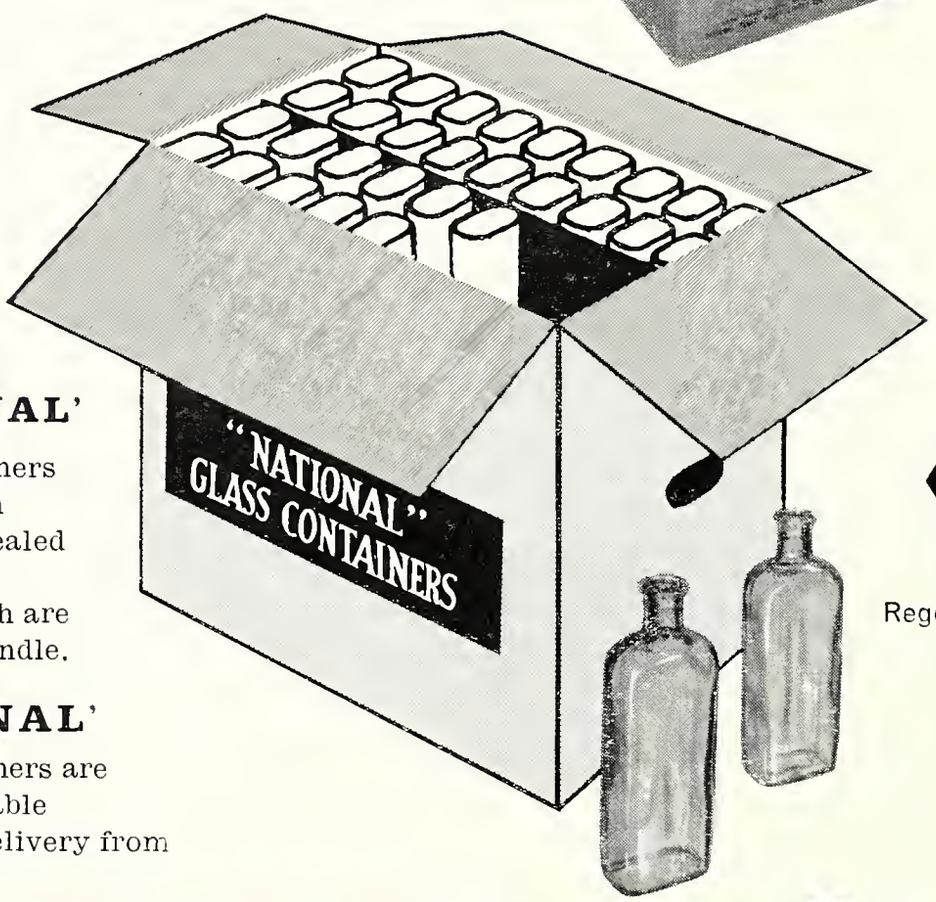
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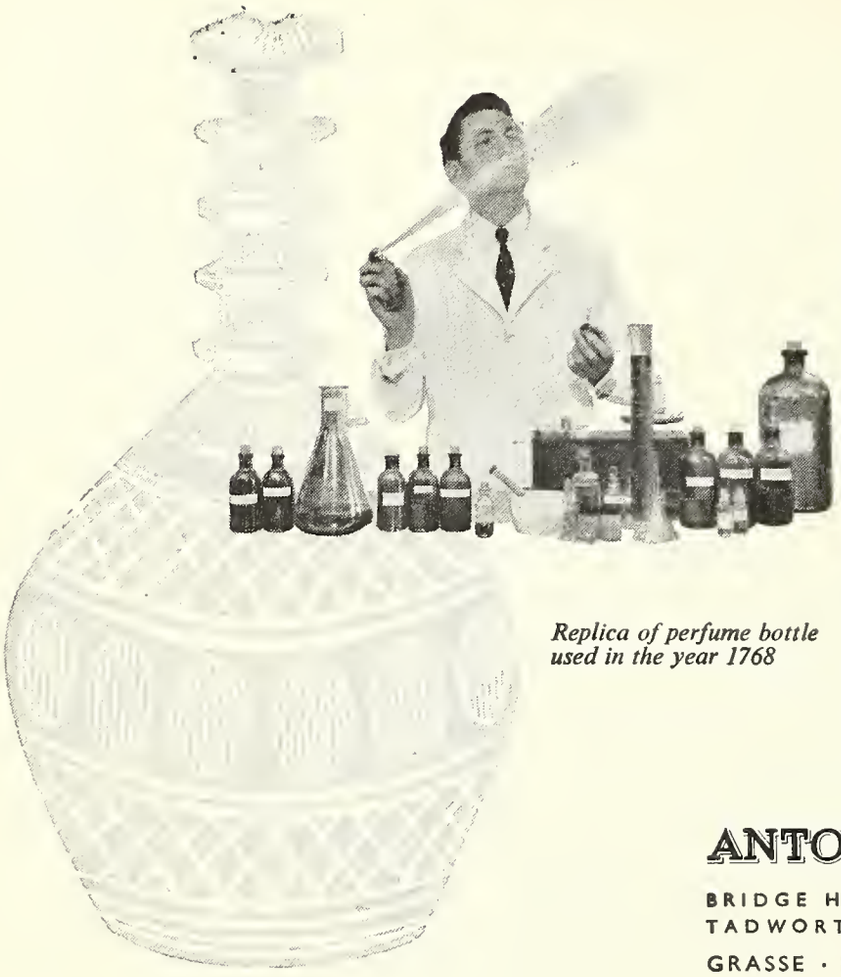


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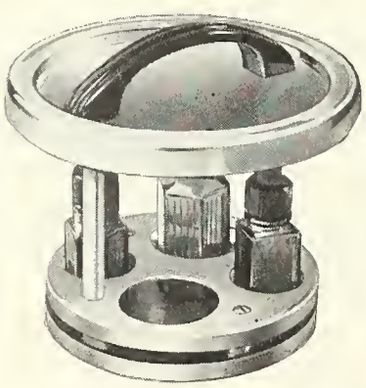
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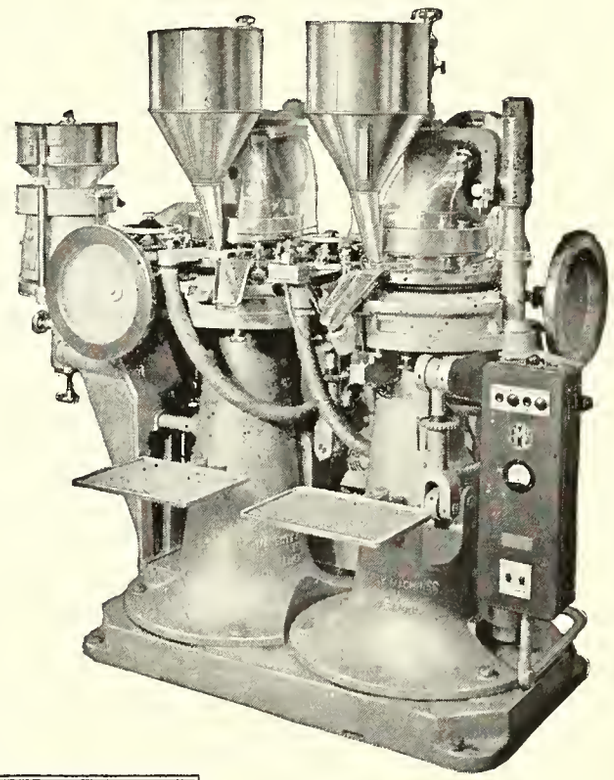
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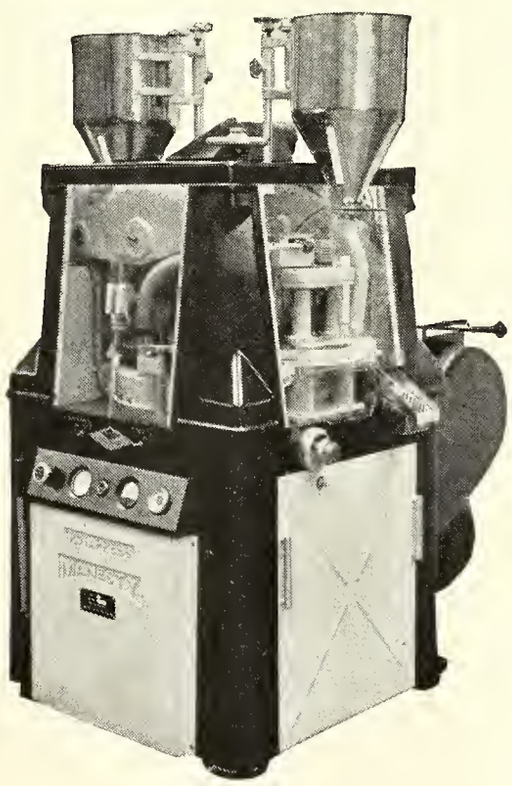
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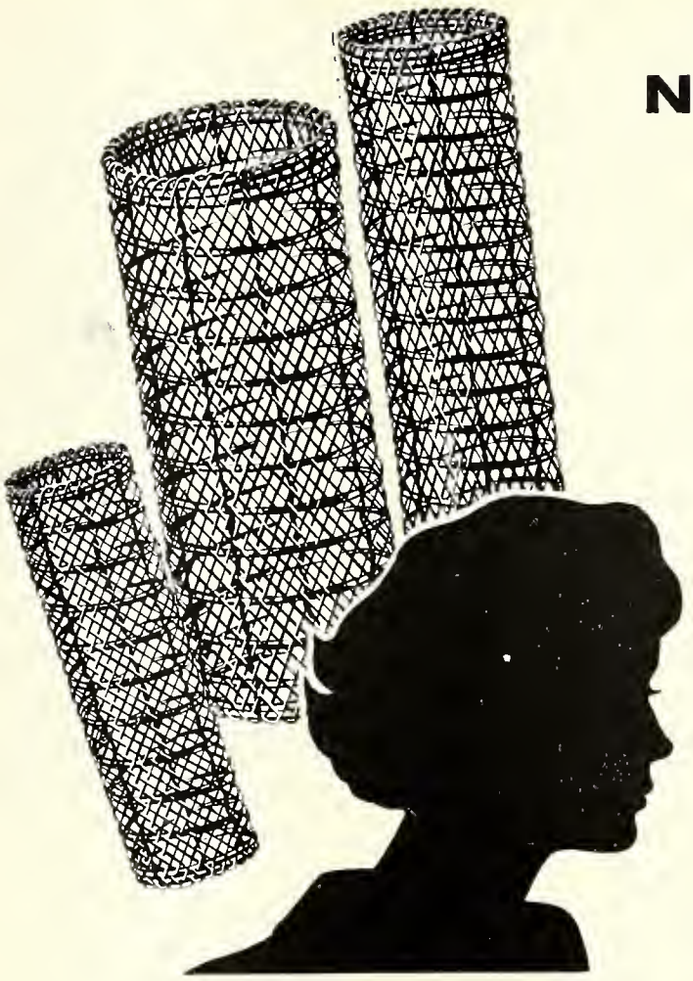
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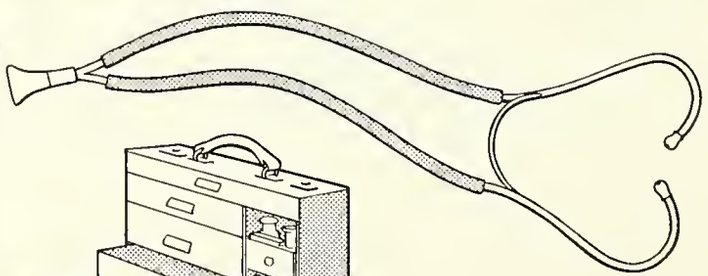
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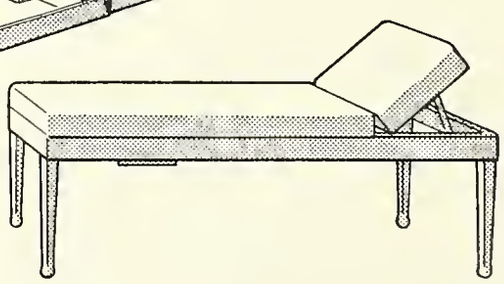


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THE
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JUNE 24, 1961

ESTABLISHED 1859

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries.

Official organ of the Pharmaceutical Society of Ireland and the Pharmaceutical Society of Northern Ireland.

VOLUME 175 No. 4245

Business Changes 645
Chemists' Remuneration 640
Coming Events 687
Commercial Television ... 687
Company News 645
Contemporary Themes ... 688
Correspondence 646
Deaths 646
Drug Prices in Eire ... 642
Echoes of the Past ... 658
Eire Health Estimates ... 642
Expansion Plans 644
Information Wanted ... 644
In Parliament 645
Irish News 640
LEADERS:
Prescription Costs ... 647
Luxury Diet 647
Legal Reports 645
Local Officers 641
Marriages 646
New Companies 646
New Products 643
News in Brief 641
News of the Week ... 639
Overseas News 642
Patents 688
Personalities 645
Pharmaceutical Societies:
Great Britain 685
Ireland 648
Northern Ireland ... 647
Pharmacist's Anthology ... 673
Print and Publicity ... 687
Sport 641
Topical Reflections ... 641
Trade Marks 688
Trade Notes 644
Trade Report 686
Wills 687

Published by
MORGAN BROTHERS (PUBLISHERS) LTD.
at
28 Essex Street,
Strand,
London, W.C.2.
Telephone: Central 6565.
Telegrams:
Chemicus, Estrand, London.

ANNUAL SPECIAL ISSUE

Where Pharmacy is ROYAL 649

Pharmacy and OPERA 655

FRIENDS in Pharmacy 659

Ilfacolor PROCESSING 662

Decorated CEILINGS at the Pharmaceutical Society's House 664

A Major Breakthrough in HERBICIDES 666

Rôle of Chemicals in OYSTER Culture 667

CYTOGENETICS and the Pharmacist 671

Weights, Mets and Measures of SCOTLAND 674

British College PHARMACOPŒIAS 677

The KAISER Foundation and How it Operates 680

Chippings and Droplets 683

TRAVELLER'S JOY 683

Index to Advertisers, pp. 5, 6 *and* 8. *Classified Advertisements, p.* 90.

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The CHEMIST AND DRUGGIST

Volume 175 JUNE 24, 1961 No. 4245

To Meet the Minister

CONTRACTORS RECEIVE AN INVITATION

THE Minister of Health (Mr. Enoch Powell) is to meet a deputation from the Central N.H.S. Committee and the National Pharmaceutical Union Executive Committee on the morning of June 26. The occasion will be the first on which the contractors' representatives have officially met the Minister since he was appointed during July 1960.

The Minister has stated that he would like an opportunity of discussing the letter sent by the Central N.H.S. Committee to the Ministry (see *C. & D.*, June 3, p. 572) on the subject of prescriptions for items having a retail price of less than 2s. and the Committee's demands that the Minister should make it clear in the House of Commons "that the 2s. charge is a payment toward the cost of the National Health Service and that it bears no relation to the value of each prescription, and that pharmacists cannot be expected to supply medicines outside the N.H.S. when the order is written on a N.H.S. prescription." Mr. F. W. Adams (registrar of the Pharmaceutical Society) is to accompany the deputation so that he can submit to the Minister the official viewpoint of the Society.

Pharmaceutical Society

REGISTRAR'S REPORT FOR 1960

THE report of the registrar of the Pharmaceutical Society for 1960 issued recently shows that, in the enforcement of the Pharmacy Acts and the Therapeutic Substances Act, 1956, it was necessary to institute proceedings in twenty-five cases. Four cases were against registered pharmacists. In two of them the offences were of selling therapeutic substances otherwise than on a prescription; one concerned the aiding and abetting of an illegal sale of a Schedule IV poison; another was an illegal sale under the Pharmacy and Poisons Act, 1933. There were ten cases against unqualified persons, five against corporate bodies that were trading as authorised sellers of poisons and six against corporate bodies not so authorised. Figures given in the report (those for 1959 are shown in parentheses) include:— Registered pharmaceutical chemists 28,156 (27,719) of whom 2,103 (2,148) were Fellows of the Pharmaceutical Society; superintendents to bodies corporate 3,796 (3,686); authorised sellers of poisons 14,860 (14,953); branch shops 4,152 (4,125); authorised sellers visited by the Society's inspectors 14,398 (13,110); listed sellers visited 1,506 (1,517); students registered 359 (213).

Scottish Executive

7 PER CENT. INCREASE IN ELECTION VOTE

IN the election of six members to the Executive of the Scottish Department of the Pharmaceutical Society, Mr. W. A. Park was returned at the head of the poll. The figures were:

Elected	
PARK, W. A.	570
KEITH, A. W.	428
COWAN, A.	406
MACPHERSON, J.	402
TAIT, W. S.	383
ANDERSON, R.	332
Not Elected	
Macmaster, W. C. ...	325
Jenkins, Miss E. M. ...	306
Meikle, Miss E .A. ...	255
Suttie, Miss M. S. ...	250
McKellar, A.	237
Morrison, J.	227
Ley, J. S.	187

Voting papers issued numbered 2,861; 957 were returned of which six were disallowed leaving 951 to be duly registered. Reply paid envelopes were issued with the voting papers on this occasion and the percentage of voting papers returned was 33·4 compared with 26·4 last year.

Executive Councils

PUBLIC TO BE ADMITTED TO MEETINGS

THE Ministry of Health has informed Executive Councils that the Public Bodies (Admission to Meetings) Act, 1961, effective June 1, enables the Press and other interested members of the public to attend meetings of Executive Councils and committee meetings that consist of, or include, all members of the Council. It applies to the Councils only so far as regards the exercise of their executive functions. In the Minister's view Councils are not acting in an executive capacity when they are dealing with any matter relating to an individual case under the National Health Service (Service Committees and Tribunals) Regulations, 1956. In cases to which the Act applies Councils are able, by resolution, to exclude the public from the whole or part of a meeting whenever publicity would be prejudicial to the public interest by reason of the confidential nature of the business to be transacted or for other special reasons stated in the resolution.

N.H.S. Remuneration

SCOTTISH CONTRACTORS' CLAIM

THE Pharmaceutical General Council (Scotland) has announced that the Staff Side of Committee B has lodged a claim with the Pharmaceutical Whitley Council for increased remuneration for chemists in contract with the National Health Service Executive Councils in Scotland. The claim, which takes account of the changes in income and overhead expenses up to January 1961, is for an average dispensing fee of 2s. 2½d. per prescription, and the present oncost allowance of 25 per cent. The contractors' representatives have asked for the claim to be considered by Committee B of the Pharmaceutical Whitley Council.

Import Duties

REVIEW OF TEMPORARY EXEMPTIONS

THE Board of Trade has begun to review the large number of temporary exemptions from import duty of goods (mainly chemicals) classified under headings 28, 29, 30, 38, 51, 58, 70, 81, 85 and 90 of the Customs and Excise Tariff that are due to expire on October 1. It proposes to recommend that the temporary exemptions be continued for a further period of fifteen months, that is, until January 1, 1963, or for such shorter period as may be warranted, unless (1) requests are received from United Kingdom manufacturers, or from U.K. agents of Commonwealth producers, that they will be in a position to meet a substantial proportion of the U.K. demand by an interim date, or (2) the applicants for exemption notify that they do not wish the exemption to be continued. Requests for the termination of exemptions should reach the Board's Tariff and Import Policy Division by July 8.

Retail Sales

BOARD OF TRADE STATISTICS

RECENTLY issued Board of Trade figures show that sales of chemists' goods by independent retailers were 0·9 per cent. lower in April 1961 than in March and 3·7 per cent. higher than in April 1960. Multiple retailers' sales were 2·7 per cent. higher in April compared with March and 7 per cent. higher than in April 1960. Sales by Co-operative societies were 1·7 per cent. lower in April than in March and 4·3 per cent. higher than in April 1960. The figures do not allow for receipts under the National Health Service.

Agricultural Chemicals

MORE APPROVED PRODUCTS

THE Agricultural Departments of the United Kingdom announce that the following further additional products have been approved under the Agricultural Chemicals Approval Scheme (see *C. & D.*, May 27, p. 536):—

Insecticides

AZOBENZENE SMOKES: Murfume Azobenzene Smoke (Murphy Chemical Co., Ltd.).

DERRIS SPRAYS: Murphy Liquid Derris (Murphy Chemical Co., Ltd.).

"KELTHANE"/DIAZINON (a mixture of a persistent chlorinated hydrocarbon acaricide and organo-phosphorus insecticide and acaricide, of mainly contact action. The combined active ingredients give a rapid knock-down of red spider mites, with good residual effect due to "Kelthane" which is also ovicidal). ATOMISING SOLUTIONS:—Kelthane Plus atomising concentrate (Murphy Chemical Co., Ltd.).

LEAD ARSENATE POWDERS: Murphy arsenate of lead powder (Murphy Chemical Co., Ltd.).

MORPHOTHION (an organo-phosphorus insecticide with systemic and contact properties, for the control of aphids and red spider on hops). EMULSIONS and MISCIBLE LIQUIDS: Murfly H. (Murphy Chemical Co., Ltd.).

SCHRADAN MISCIBLE LIQUIDS: Brussels Sytam (Murphy Chemical Co., Ltd.).

Fungicides

MANEB WETTABLE POWDERS: American Dithane (Pan Britannica Industries, Ltd.).

NABAM (for use with Zinc Sulphate to produce a Zineb tank-mix for the control of tomato leaf mould): Dithane D.14 and zinc sulphate (Pan Britannica Industries, Ltd.).

Proprietary Medicines

PREPARATIONS IN CATEGORIES N AND P

THE Departments of Health have circulated to general practitioners and others in the National Health Service, the following lists of the preparations that have been classified in categories "N" (new drugs of proved value which are not yet standard) and "P" (preparations which are not "standard," for which *prima facie* evidence of therapeutic value is present, but which the Committee cannot accept as of proved therapeutic value without further evidence which must be supplied within a period stipulated by the committee).

Preparations in Category N

Asimetion tablets
Alcopan granules
Aldactone tablets
Anahaemin injection
Anthiphen tablets
Apresoline injection
Apresoline tablets
Asterol tincture
A.T.10 solution
Bioglan-R-injection
Celbenin
Colcemid injection
Colcemid tablets
Colliron I.V.
Cytostatic E.39 capsules
Cytostatic E.39 soluble ampoules
Daranide tablets
Darenthin tablets
Degranol injection
Entamide tablets
Entobex tablets
Episol cream
Episol lotion
Examen
Ferrivenin injection
Flagyl tablets
Fulcin tablets
Fungizone
Furamide tablets
Grisovin tablets
Hepastab injection
Hepatex T.
Ilidar tablets
Imferon
Ismelin tablets
Katonium powder
Livadex injection
Liver injection, U.S.P.
Marsilid tablets
Melsedin tablets
Methionine B.D.H. tablets
Mycil dusting powder
Mycil ointment
Mycil pessaries
Mycil spray
Mycil vaginal paste
Narphen injection
Neo-Ferrum intravenous
Neo-Hepatex
Nystatin ointment
Nystatin for suspension
Nystatin tablets
Nystatin vaginal tablets
Para-Thor-Mone injection
Parathyroid hormone (Pabyrn)
Penicillamine D.C.(B)L. capsules
Pernaemen forte injection
Pyrazinamide tablets
Resonium A
Tapazole tablets
Telmid tablets
Tofranil ampoules
Tofranil tablets
Tretamine Avlon (T.E.M.) ampoules
Tretamine Avlon (T.E.M.) tablets
Transid tablets
Trichorad tablets
Trillekamin
Tritheon tablets

Preparations in Category P

Cavodil tablets
Distivit oral (Peptide complex)
Marplan tablets
Niamid tablets
Nardil tablets
Tersavid tablets
Trypure Novo
Tryptar ointment

CHEMISTS' REMUNERATION

Correspondence between Ministry and contractors

THERE has been an exchange of letters between the Central N.H.S. (Chemist Contractors) Committee and the Ministry of Health since the Committee lodged its claim for a 2s. dispensing fee and increases of the "urgent" and rota fees. The Committee on June 14 received the following letter from the Ministry of Health:—

I WRITE to let you know that your letter of June 8, lodging a claim for an increase in the dispensing fee and certain other fees and allowances, has been received.

Committee A of the Pharmaceutical Whitley Council has recently been reviewing chemists' remuneration in the light of the joint accountants' report of an enquiry relating to the year 1957 and of suggested projections for later years of the figures brought out by that report. As a result of subsequent informal discussions between representatives of the two sides, the Minister agreed, in deference to the views expressed by the chemists' representatives, that the proposals which the Management Side had put forward for changes in chemists' remuneration should not be proceeded with for the time being, on the basis that the position would be reviewed as soon as three months' experience of the effect of the higher prescription charge is available and that meantime discussions would continue to try and resolve the outstanding points.

These outstanding points, as you will remember, were (apart from certain points of detail):—

(i) the amount of the profit;
(ii) the proposal to offload a portion of the remuneration from the oncost allowance to the dispensing fee;
(iii) the proposal to introduce some element of differential in the oncost allowance;
(iv) how to obtain reliable and up-to-date information about facts relevant to chemists' remuneration, a problem which arises also in relation to reimbursement and to the container allowance.

Consideration of these points must underlie any consideration of chemists' remuneration, and I should therefore be grateful if in the first place you would confirm your readiness to discuss them.

At the same time, I should be grateful if you would be good enough to let me know upon what facts, additional to those brought out in the joint accountants' report and in the subsequent negotiations and discussions, the Central N.H.S. (Chemists Contractors) Committee rely to support the specific increases proposed in your letter.

The letter ignores, it will be noted, the statement made by Mr. G. H. M. Graham, the Committee's chairman, at the national conference of representatives of Pharmaceutical Committees in London on June 7 (see *C. & D.*, June 17, p. 630). Mr. Graham's reply was:—

UNTIL the Central N.H.S. (Chemist Contractors) Committee has met to consider several factors that arise in the new situation resulting from the decisions taken at the recent conference, I shall not be in a position to let you have the committee's views on the first part of your letter of June 13. But in the meantime, I can let you have my comments on your letter.

You ask me to let you know upon what facts the Central N.H.S. Committee intends to rely to support the increases proposed in my letter of June 8; I can best deal with this by letting you know what was decided at the recent Conference of Representatives of Local Pharmaceutical Committees:—that the negotiating committee should not try to support the claims by "arithmetical arguments conducted in terms of the third or fourth place of decimals of a penny"; that 2s. per prescription represents a reasonable fee for the professional dispensing services provided by the chemist; that 25 per cent. on-cost is the lowest rate of profit at which a retail chemist can properly be expected to conduct his business; that 2½d. per prescription will cover the cost of dispensing all tablets in bottles and that the increases in the "urgent" fee and rota payments claimed represent reasonable increases having regard to what has happened to the overhead costs of providing the service since 1948 and to what payments are made to others who are called upon to "turn out" or to "stand by," e.g., plumbers, physiotherapists on call in the hospital service, etc.

You will see that our claim is formulated on an entirely different basis from any used hitherto; it is not based on the Joint Accountants' Report nor on anything in the talks which followed that Report. The conference decided that future negotiations should not be founded on an overall remuneration basis and that a professional fee for the professional service provided should be the basis, plus an on-cost of 25 per cent. for the commercial aspect of the service.

In the circumstances, I cannot see that any useful purpose would be served by arranging a meeting to discuss points 1, 2 and 3 of the third paragraph of your letter of June 13, and so far as point 4 is concerned, that has no bearing, in my opinion, on what the proper level of remuneration should be but it is something that will need to be considered at a later stage only so far as it relates to on-cost, container allowance and rota fees.

Representatives of my committee will, of course, be prepared to meet you and your colleagues round the table in order to amplify further the basis of our claim. In this connection you will know, of course, that we are to see the Minister on the morning of Tuesday, June 26; it may be that there will be sufficient time available then for a preliminary talk on our claim.

B.P.C. 1959

AMENDMENTS AUTHORISED

THE Council of the Pharmaceutical Society has authorised the publication of the following amendments to the British Pharmaceutical Codex 1959:

Page 125. Calcium hypophosphite
Page 431. Manganese hypophosphite
Page 602. Potassium hypophosphite
Page 692. Sodium hypophosphite
Phosphite. Delete this requirement

IRISH NEWS

THE NORTH

Associates' Section

MONTHLY COMMITTEE MEETING

THE June meeting of the Associates' Committee of the Ulster Chemists' Association was held in Belfast, on June 5, Mr. R. J. Davidson (chairman) presiding. A report of the social subcommittee held on May 15 was received, After the meeting a presentation was made to Miss J. Ramsey to mark the occasion of her forthcoming marriage, by Miss M. Meneely (auditor), who, on behalf of the Associates' Section, expressed best wishes for her future happiness. The chairman and other members present added their good wishes.

NEWS IN BRIEF

THE Hydrocarbon Oil Duties (Drawback) (No. 3) Order, 1961 (S.I., 1961, No. 1099) just made by the Treasury, and in operation since June 19, provides for the allowance of drawback of customs or excise duty paid in respect of hydrocarbon oil used in the manufacture or preparation of a specified type of water-repellent agent.

A WORLD Health Organisation expert committee on antibiotics has reviewed the advantages and disadvantages of the main methods at present in use for determining microbic sensitivity and has recommended the methods it considers most practical for particular purposes. The results are embodied in World Health Organisation Technical Report, 1961, No. 210, price 1s. 9d. per copy.

THE new president of the Pharmaceutical Society of Great Britain (Mr. H. S. Grainger) and Dr. H. S. Bean recently returned from a visit to Lyons as exchange visitors under the auspices of the Franco-British Commission. At Lyons they were received by M. Chambon (professor of the School of Pharmacy in the *Faculté Mixte de Médicine et de Pharmacie*). They visited hospitals in Lyons, the homœopathic pharmacy of M. Boiron, the Laboratoires Sarbach at Chatillon des Dombes; the Laboratoires Merieux (principal serological laboratory in France); and the Specia laboratories of the Rhône-Poulenc organisation.

SPORT

Golf. — MANCHESTER PHARMACISTS' GOLFING SOCIETY, Wilpshire Golf Club, on June 14. *Results: Nicholas Products, Ltd., Prize:* 1, W. Eastwood, 33; 2, G. Pasguill, 32.

LONDON CHEMISTS' GOLFING SOCIETY, at Hendon Golf Club, on June 15. Visitors' day. Attendance of members and guests totalled forty-eight. *Results: Members: Mentholatum Prize,* 1, J. Buchanan (18), 60; *Squibb Centennial Trophy and Prize,* 1, H. A. Coward (14), 72; *Jubilee Vase and Prize,* 1, W. N. Cockburn (10), 74; *Visitors:* 1, S. M. Hutchieson (11), 69; 2, G. L. Meek (12), 70.

SOUTH LONDON AND SURREY PHARMACISTS' GOLFING SOCIETY, at Addington Golf Club, on June 14. Stableford competition. *Results: Captain's prize,* 1, A. U. Hall (Banstead), 39; 2, M. B. Doyle (Sudbury), 34; 3, S. M. Hutchinson (Blackheath), 32. *Eighteen and over handicap prize,* G. Howell (Banstead), 31. *Prize for best score on first nine holes,* G. Penman (Wimbledon Park). *Prize for best score on last nine holes,* G. Roberts (Wyke Green).

Cricket.—COVENTRY CHEMISTS. In their annual cricket match against the Coventry doctors' team at the Coventry and North Warwickshire ground, Binley Road, on June 8, the pharmacists easily beat the doctors' eleven. The doctors batted first and, against accurate bowling, were soon all out for thirty-three. Best bowling figures were by D. Norton (4 for 11) and E. Brecze (3 for 9). The chemists scored the necessary runs for the loss of two wickets, and at the end of play they were 100 for three, of which Norton made forty-eight not out, and R. G. Nicklin twenty-seven not out. It was the first time for seven years that the chemists had defeated the doctors.

LOCAL OFFICERS

PHARMACEUTICAL SOCIETY

Reading Branch. — *Chairman,* J. R. Butler; *Vice-chairman,* Mrs. N. Williams; *Secretary,* H. Williams; *Treasurer,* D. B. Bird.

NATIONAL PHARMACEUTICAL UNION

Cardiff Branch. — *Chairman,* J. Price; *Vice-chairman,* H. S. Owen; *Treasurer,* B. Steyn; *Secretary,* E. C. E. Weekley, 131 Bishopston Road, Ely, Cardiff.

TOPICAL REFLECTIONS

By Xrayser

Danger to the public

Members of Parliament drew the attention of the Minister of Health on June 12 (p. 617) to the sale of tablets "purporting to modify the effects of alcohol." Exactly one week had passed since the subject had been raised with the Minister, and the renewed questioning suggests, to the uninitiated, that the replies on the first occasion had not given complete satisfaction. On June 5 Mr. Gresham Cooke stated that tablets "are on sale in pubs and sweet shops, which might give the impression that drunken motorists can cure themselves from alcoholism by taking these pills." Mr. Gresham Cooke also said that the tablets were banned by the Pharmaceutical Society from being sold in chemists' shops. In reply Miss Edith Pitt (Parliamentary Secretary, Ministry of Health) said that it was not quite correct to say that the Pharmaceutical Society had banned them. It had issued a notice advising chemists "in view of the possibility of misuse and the consequent danger to the public" they should not stock or sell these preparations, *but the evidence available did not suggest that they were medically harmful, added Miss Pitt.* Mr. Gresham Cooke had not suggested that they were, any more than had the Pharmaceutical Society. The danger to the public, implicit both in Mr. Cooke's question and in the Society's advice to the pharmacist, was that drunken motorists constituted that danger, more particularly when they had taken a medicine which they imagined had had a magical effect on their condition. The Pharmaceutical Society has again acted responsibly in issuing its advice, and has put on record its sense of public duty. The same cannot be said of the Minister of Health for, in the discussion on June 12, Miss Pitt said again that there was no evidence to suggest that the tablets were medically harmful. She added that the question of the effect of taking the pills in relation to driving was not for her department. Perhaps the next step will be for Mr. Gresham Cooke to ask the Postmaster-General if he can supply an address to which he may direct any further questions on the matter. It may be that the question belongs to the Ministry of Education. The P.M.G. may enlighten us.

Response to stimulus

I think that time will show that your editorial assessment of Mr. Enoch Powell (p. 625) is correct—he will go down in history as the man who welded together the various components of pharmacy and gave them a common purpose. It is possible to be obstructive and difficult in negotiation and, in our easy-going country, to arouse the easy-going citizen to a point at which he grumbles. That is traditional. But when a body of loyal and conscientious people finds those qualities treated with contempt, and "consultation" takes a new meaning wherein the proceedings bear a marked resemblance to Hans Sachs's monologue, with pharmacy obligingly cast for the rôle of worshipping audience, then officialdom need not be unduly surprised if that audience itself reserves the right to show disapproval. The letter signed by "Veteran" in last week's issue shows a full appreciation of all that is at stake, and I heartily endorse his judgment. The present situation demands the full support of every pharmacist and of all his organisations. So far as the present struggle is concerned, the ghost of Jenkin was effectively laid at the Branch Representatives' meeting in May by Mr. Adams himself. In recent months, practically everything that is sacred to the pharmacist—his personal pride, his professional ethics and his reward for services, have been ruthlessly and needlessly trampled upon. He is now aroused.

Happy marriage

The photographs of the pharmacy of Mr. Gilbert White, Burnham Market, Norfolk (p. 623), made a strong appeal to the apothecary instinct I have inherited from my ancestors. With a careful regard for tradition, and an appreciation of the artistic, Mr. White has succeeded in presenting to his public an interior which tells them at once that they have entered a pharmacy—a fact which is obviously appreciated.

OVERSEAS NEWS

UNITED STATES

Pharmacists to Initial Labels

To impress upon the public the full responsibility of the pharmacist for the quality of his services, the Michigan Pharmacy Board has adopted a rule making it obligatory for a pharmacist in the State to place his or her initials on the label of every label of dispensed medicine.

Drug Standards Laboratory

THE establishment of a Drugs Standards Laboratory to provide direct laboratory services to the United States Pharmacopeia and American National Formulary was announced at the recent annual meeting of the American Pharmaceutical Association. It will investigate the suitability of the drug standards and specifications before admittance to the compendia and is expected to expedite the revision of monographs. The laboratory is to be jointly financed by the American Medical Association, the American Pharmaceutical Association and the United States Pharmacopeia, and will be situated in Washington D.C. in the American Institute of Pharmacy building.

Bill to Control Drug Industry

SENATOR Estes Kefauver (chairman of the Senate anti-monopoly subcommittee) has introduced a Bill to impose federal controls on the drug industry by requiring the licensing of all manufacturers of pharmaceutical specialities to restrict to three years the patent rights of discoverers of new drugs. A companion Bill was introduced in the House of Representatives by Congressman Celler. One of the major effects of the Bill would be to place responsibility for the efficacy and safety of new drugs on the Food and Drugs Administration. It would also require product labels to include the licence number of the manufacturer, an accurate statement of quantity "in terms of weight, measure or count," and the official (generic) name of the drug in type at least as large and as prominent as the brand name.

Trade Unionism in Pharmacy

THE May 1 issue of *American Druggist* gives prominence to a campaign by the Teamsters Union [an equivalent might be the Transport and General Workers' Union in Britain] to recruit pharmacists for its recently formed affiliate the Registered Pharmacists' Organisation of Illinois. The Union's appeal is directed to both proprietor and employed pharmacists and one of the inducements is an offer to "close up" discount prescription operations of other unions. The timing of the campaign coincides with the intensified competition many pharmacists are encountering as a result of the breakdown of fair trade laws and the growth of discount schemes by trade unions and by other groups. Another inducement held out to pharmacists to join the union is the promise of the Teamsters' support in legislative programmes designed to stem the erosion of pharmacists' business by non-pharmacists.

PRICES OF DRUGS TOO HIGH?

Discussion on Radio Eireann

"DOES the panel think the prices of drugs in the Republic is too high?" was the subject of a thirty-minute quiz on Radio Eireann recently, when a cross-section of public opinion gave its views on the subject.

A general practitioner was of the opinion that aspirin was much more effective than the average person imagined. Modern drugs resulted in people's being restored to health much more quickly than formerly, and that, in terms of time saved, meant money. From that point of view such drugs were not nearly as dear as some people thought. A person suffering from pneumonia was restored to health in a few days as a result of modern drugs, whereas in the old days the relatives were anxiously watching the crisis, and the cost of such protracted illness was eventually much dearer than at present, when effective drugs brought speedy and successful results.

MR. P. A. BRADY, T.D. (representing the Council of the Pharmaceutical Society of Ireland), said that chemists did not "mulct" anybody, and people who thought so were labouring under a misconception. Pharmacists, he added, did a good job for a small remuneration.

A suburban chemist said that pharmacists ran the risk of stocks becoming "dated" on their shelves, which helped to run away with the profits.

A representative of the Irish Housewives' Association said the cost of medicines was too high. No matter who was responsible something would have to be done to reduce prices, and an inquiry, at official level, was badly needed.

MR. T. F. O'HIGGINS, T.D. (former Minister for Health), said if people thought the price of medicines was too high it must be so.

DR. NOEL BROWNE, T.D. (also a former Minister for Health) believed the price of medicines to be too high, and put the blame to some extent on the fact that there was a lack of co-operation between the various manufacturers of modern drugs. They seemed to be going to unnecessary expense in trying to out-do each other, and were spending unnecessarily large sums on advertising. If they were brought under proper control prices would be much cheaper. State medicine was the only answer to the present position.

DR. VINCENT BARRY (a research specialist) said that considerable sums had to be spent by chemists and pharmacologists in the field of research. Such expenditure was inevitable if drugs were to attain the highest possible standard of efficiency. In addition, expensive tests had to be carried out on animals and it all added up to making the prices dearer.

EIRE HEALTH ESTIMATES

Debate in the Dail

BECAUSE of the high cost of new drugs, said DR. NOEL BROWNE in the Dail Eireann on June 16, middle-income group patients were unable to take advantage of them, and doctors were placed in the unethical position of having to prescribe less effective, but cheaper, drugs. Dr. Browne, who was speaking on the estimates for public health, added that there should be a free choice of doctor in a National Health Service, and the time must come when the dispensary system would be replaced by a general-practitioner service with a free choice. That would encourage an influx of young doctors who would be glad to take up the challenge of competing on the same terms as the dispensary doctor.

MR. J. M. DILLON (Leader of the Opposition), referring to the issuing of blue cards, said that the county managers could not have enough knowledge of individual cases to decide whether a card should be issued or not. Many people felt a deep sense of grievance when they did not get cards under the new system. The machinery for investigation was "most unsatisfactory and unsympathetic." The dispensary system should be replaced in the larger cities by a system under which families could choose their own doctor. That would not suit in rural areas, where there was often only one doctor. Dispensary doctors were overworked in the cities and larger towns.

MR. T. KYNE said that for some reason the number of people who were entitled to medical cards in Waterford was falling year by year. There had been a severe tightening up of the means test. A good deal of resentment against the Health Act arose from the outdated yearly income limit of £800, which put people outside the scope of the Act.

Introducing the health estimate of £6,799,800, the MINISTER FOR HEALTH (Mr. S. MacEntee) said that the fact that so many new cases of tuberculosis occurred each year showed that a large pool of infection still existed. That was disquieting, as it indicated that the measures for the prevention and early diagnosis of the disease, which were ready to hand, were not being used as widely as they ought to be. That was especially the case with BCG vaccination and mass radiography. The Minister said that if a dispensary doctor was so callous as to exploit the need of a poor person who was without means to engage a private doctor, then he was certain that the Dail would not expect him to tolerate such exploitation. Lack of proper attention to eligible patients, or the demanding, or acceptance, of fees from them, would be dealt with most severely.

MR. MACENTEE said it had been found necessary to consider the provisions in various Acts relating to the registration, among others, of pharmacists and opticians, and dealing with disciplinary control in cases of serious misdemeanours, which would lead to the persons concerned being struck off the appropriate register. The debate was adjourned.

NEW PRODUCTS AND PACKS

New Aerosol Packs.—Glaxo Laboratories, Ltd., Greenford, Middlesex, announce the introduction of Efcortelan and Predsol spray lotion aerosol packs which will be available in addition to the existing plastic bottle packs of those lotions.

Low Phenylalanine Food. — A new product available in the treatment of phenylketonuria is a speciality launched by Mead Johnson, Ltd., Morris House, Berkeley Square, London, W.1. Lofenalac is made from specially processed cascin hydrolysate low in phenylalanine, Dextri-maltose carbohydrate modifier, arrowroot starch, corn oil, vitamins, minerals and amino acids. It is indicated as a complete food for infants and in dietary management of phenylketonuria (and should only be prescribed for patients suffering from that condition). The pack is a 2½-lb. can with measuring scoop.

A Paste for Cleansing Dentures. — Pharmaceutical Products, Ltd. (a Savory & Moore company) are marketing through Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1, a



new product claimed a "revolutionary cleansing paste for dentures." The product, Denisol, is applied to a toothbrush and brushed on to the denture. It is understood to be non-abrasive and to contain no corrosive elements. The manufacturers point out that, in professional dental circles, there is a growing opinion that the practice of wearing the dentures overnight is to be encouraged, particularly for partial dentures. Denisol is claimed to leave no trace of powdery film on the dentures and to be completely smooth to the touch of the tongue.

Household Spray Products.—Copydex, Ltd., 1 Torquay Street, Harrow Road, London, W.2, have launched three new products in the Spraydex range. Spraydex starcher, a semi-permanent starch in liquid form, is applied by lightly spraying, at a distance of about 1 ft., the garment or fabric to be starched, and is claimed to remain effective through a number of washings, according to the degree of stiffness given in the first instance. By means of the starcher garments may be "crisped and brightened up" just before wear, without rewashing. Spraydex fragrant moth-proofer is intended for use in moth-proofing carpets, furnishing fabrics and clothing, and is



claimed safe for use on the most delicate fabrics and furs. The 8-oz. bottle is understood to be sufficient to moth-proof 220 sq. ft. of material but re-proofing with Spraydex moth-proofer is recommended after twelve months or after dry cleaning. Spraydex all-purpose garden spray is an insecticide claimed effective against greenfly, blackfly, thrips, weevils, caterpillars, leaf miners, woolly aphids, etc. It is easily applied to the undersides of leaves, and is useful also for the indoor and window-box gardener. The spray is not recommended for use on very young hydrangeas.

Mink-oil Beauty Cream.—Produced by Physico-Chemical Processes, Ltd., London, and distributed by Abbey Parfumerie, Ltd., 7 Oxford Circus Avenue, London, W.1, Millionairess beauty



cream with mink oil contains sixteen ingredients plus the mink oil (of French origin). Claimed "the most scientifically balanced product yet to be put on the market," and to have a carefully controlled rate of penetration, it is stated not to vanish immediately on application to the skin but to be absorbed gradually over a period in order that the mink oil may be allowed to penetrate slowly. It is used on the neck and face after they have been well cleansed.

Cream Shampoo for Men.—André Philippe, Ltd., 71 Gowan Avenue, London, S.W.6, have produced a cream shampoo in sachet (No. 105) as an addition to their "50/50" range of men's toilet preparations and having the same perfume.

A Luxury Cosmetics Range.—A new Black Opal range of beauty preparations launched by Rimmel, Ltd., 62 Baker Street, London, W.1, is described as "the Rolls-Royce of Rimmel cosmetics," and as a "combination of superb presentation and generous quantities at a price everyone can afford." The range includes perfumed Cologne; hand cream; lipstick in eleven colours; and mascarola.

A New and "Elegant" Perfume.—Named after the company's president, "Madame Rochas" is described as "the newest and most dazzlingly elegant perfume" to be launched by Parfums Marcel Rochas (England), Ltd., 56 Grosvenor Street, London, W.1. The



perfume is a blend of essences of roses, jasmine, tuberoses, Florentine iris, a few herbs, lichen, patchouli, citrus, ambergris, Tibetan musk and Arabian incense. The design of the carton, in tawny tones, is based on an eighteenth century tapestry, and the bottle is a copy of an eighteenth-century flacon. Distribution is being organised to put the product on sale during the first week of September.

A Summer Protection Cream.—Lentheric, Ltd., 17 Old Bond Street, London, W.1, have produced in their new Sun 'n Wind cream a product designed to act as a protection against (a) burning by the sun while allowing a tan to develop naturally, and (b) "that weather-beaten 'tortoise' look caused by exposure to wind and harsh weather conditions." The cream is being marketed in an attractive tube and spreads easily, giving full coverage. It is not greasy.

Daily Hair Beauty Treatment. — Steiner (Steiner, Ltd.), Grosvenor Street, London, W.1, have launched a new hair dressing called Sixty 6, "a genuine daily beauty treatment for all hair." It contains a branded ingredient, Sebosyn, claimed "the nearest-to-nature hair food," and an anti-static ingredient to repel dust. In use, a small amount ("¼ in.") of Sixty 6 is rubbed between the palms, smoothed lightly through the hair and brushed into shape. The pack is a gold-topped tube.

TRADE NOTES

A 25-tablet Tube. — Horlicks, Ltd., Slough, Bucks, have produced for over-the-counter sale a 25-tablet pack of Nulacin.

Works' One-day Closing. — The offices and warehouse of J. H. Haywood, Ltd., Nottingham, will be closed on June 28 for the company's outing.

Discontinued.—Glaxo Laboratories, Ltd., Greenford, Middlesex, have discontinued the manufacture of Efcortelan-N intra-articular injection of hydrocortisone with neomycin.

Insurances for Pharmacists. — One company exists that specialises in insurance for pharmaceutical chemists: The Chemists' Mutual Insurance Co., Ltd., 4 Queen Square, London, W.C.1.

Tissues With Sun-tan Cream.—With every 3s. 6d. (medium-size) tube of Cooltan cream (Cooltan Laboratories, 67 Effra Road, London, S.W.2) is being given a free polythene pocket-pack of Kleenex tissues [corrected note].

Tablets in Bulk.—The manufacture of tablets for the trade is undertaken by ARTHUR H. COX & CO., LTD., 93 Lewes Road, Brighton, 7; RICHARD DANIEL & SON, LTD., Mansfield Road, Derby; and THOMPSON & CAPPER, LTD., Speke, Liverpool, 24.

A Manufacturer's Right.—Manufacturers who attach price conditions to their goods may enforce those condition in the courts. Assistance in using those conditions is offered by the Proprietary Articles Trade Association, 43 Gordon Square, London, W.C.1.

Sole Distributors.—Grabowski Export Import, Ltd., 175 Draycott Avenue, London, S.W.3, are the representatives and the only stockists in Britain of Bralium lotion, makers of which are Hefa, G.m.b.H., Werne-on-the-Lippe, Western Germany. Bralium is a preparation for the external treatment of psoriasis.

New Tablet Sizes. — The Distillers Co. (Biochemicals), Ltd., Speke, Liverpool, 24, state that, in order to conform with the recommendations in the 1960 Addendum to the British Pharmacopœia, 1958, they are altering the size of Distaquaine V-K tablets containing 125 mgm. each of penicillin V as potassium salt. The change affects all packs from batches T1369 and G1 onwards. Distaquaine V-K tablets containing 60 mgm. each are also affected. New sizes of those tablets are being made available shortly.

Other Stockists.—The New Croydon Rubber Co., Ltd., 36 Mitcham Lane, London, S.W.16, state that, owing to an unfortunate error, which was noted too late for correction, the following stockists have been omitted from the company's Pompette shampoo spray advertisement in this issue:—Bedford: Sangers, Ltd.; Bournemouth: The Chemists Supply Co., Ltd.; Bristol: Sangers, Ltd.; Llandudno: John Thompson, Ltd.; London: May, Roberts & Co., Ltd.; Sangers, Ltd.; Newcastle-on-Tyne: Sangers, Ltd.; Reading: H. Tillner, Ltd.

Bottles.—"Eye appeal" is a quality claimed for glass bottles designed by BEATSON, CLARK & CO., LTD., Rotherham, Yorks; bottles, whether of glass or polythene, are the subject in which LAX & SHAW, LTD., 69 South Accommodation Road, Leeds, 10, claim expert knowledge; prompt delivery of glass containers in closed-top, sealed cartons is undertaken by NATIONAL GLASS WORKS (YORK), LTD., Fishergate, York.

Wholesale Supply Services.—Services offered to the pharmacist in the supply of products by wholesale are the subject of announcements in this issue by LOFTHOUSE & SALTMER, LTD., Hull; by MAWSON & PROCTOR PHARMACEUTICALS, LTD., Low Friar Lane, Newcastle-on-Tyne, 1; by SANGERS, LTD., London, and associated companies (May, Roberts & Co., Ltd., London, Liverpool, Maidstone and Plymouth; Thomas McMullan & Co., Ltd., Belfast; Southall Bros. & Barclay, Ltd., Birmingham; Chemists' Supply Co., Ltd., Bournemouth; Sangers, Ltd., Bristol and Newcastle; Francis Newbery & Sons, Ltd., Cardiff; Hirst Brooke Goodalls, Ltd., Leeds; John Thompson, Ltd., Liverpool and Llandudno; H. Tillner, Ltd., Reading; and Brooks & Warburton, Ltd., Surrey); by SMITH & HILL (CHEMISTS), LTD., Matilda Street, Sheffield, 1 (in Sheffield, Nottingham and Doncaster); and by JAMES WOOLLEY, SONS & CO., LTD., Victoria Bridge, Manchester and Nelson Street, Preston (and J. C. Arnfield & Sons, Ltd., Brinksway, Stockport, Ches.).

Chemicals, Botanicals, Galenicals.—Suppliers of the materials for making medicinal and other products of the pharmacy include AGROEXPORT, Bucharest, Str. Doamnei No. 12/2D, Rumania (Rumanian medicinal herbs); ANTOINE CHIRIS, LTD., Bridge House, Tadworth, Surrey (essential oils, floral absolutes, chemical isolates, etc.); WILLIAM BLYTHE & CO., LTD., Holland Bank Chemical Works, Church, Lancs (sodium metabisulphite, hyposulphite and sulphite); BRITISH DYEWOOD CO., LTD., 19 St. Vincent Place, Glasgow, C.1 (tannic, gallic and pyrogallic acids, etc.); the chemical division of DISTILLERS CO., LTD., Devonshire House, Mayfair Place, London, W.1 (diethyl sebacate and phthalate; isopropyl myristate and palmate, etc.); DOTT. INVERNI & DELLA BEFFA, S.p.A., 99 Via Ripamonti, Milan, Italy (alkaloids, glycyrrhizin, aspartic acid compounds, squill glycosides, etc.); H. FRISCHMANN, 4 Lloyd's Avenue, London, E.C.3 (camphor, menthol, gums, resins, etc.); H. W. GRAESSER-THOMAS, LTD., 49 Leadenhall Street, London, E.C.3 (aspirin, salicylates, vanillin, etc.); LAKE & CRUICKSHANK, LTD., North Bridge Road, Berkhamsted, Herts (quinine and salts and related compounds); MACANDREWS & FORBES, LTD., 2 Caxton Street, London, S.W.1 (block liquorice juice); MACFARLAN SMITH, LTD., Wheatfield Road, Edinburgh, 11 (opium alkaloids); TRADE COMMISSIONER FOR MYSORE, 28 Cockspur Street, London, S.W.1 (sandalwood oil); STAFFORD ALLEN & SONS, LTD. (galenicals); WASHINGTON CHEMICAL CO., LTD., (magnesium chemicals); A. F. SUTER & CO., LTD., 58 Mark Lane, London, E.C.3 (shellacs, gums, waxes).

Bonus Offers

LUSTY'S NATURAL PRODUCTS CO., LTD., London Road, Westcliff-on-Sea, Essex. Rheumalene balm, pilewort ointment, herbal skin cream and lemon hand cream in tubes. Additional 15 per cent. on order value £1 or over received before June 30.

MEGGESON & CO., LTD., Llewellyn Street, London, S.E.16. Meggezones; Meggeson dyspepsia tablets; Gee's linctus pastilles, B.P.C.; children's Meggezones; Meggeson glycerin, lemon and honey pastilles; and Meggeson glycerin and blackcurrant pastilles. One doz. tins of Meggeson's glycerin and blackcurrant pastilles or glycerin, lemon and honey pastilles or Gee's linctus pastilles with each order value £10.

EXPANSION PLANS

F. W. HAMPSHIRE & CO., LTD., Sunnydale Works, Sinfin Lane, Derby, are extending their premises and a new building of 9,000 sq. ft. is in course of erection to cope with their increased sales.

FARBENFABRIKEN Bayer A.G., Leverkusen, Germany, and financial circles in El Salvador have founded a company in El Salvador for the production of liquid plant protection chemicals for cotton. The new firm will be called Bayer de el Salvador SA (BAYSAL) and it will produce about one million litres of liquid insecticide a year.

PFIZER, LTD., Sandwich, Kent, announce that agreement in principle has been reached for the acquisition of the assets and the present product range of the Bayer Biological Institute at Exning, Suffolk. Whilst excluding products in the canine hepatitis field, the agreement will provide for the marketing by Messsrs. Pfizer of veterinary chemotherapeutic agents. The final contracts are expected to be exchanged shortly. The additional facilities afforded by the acquisition to those already existing in the Pfizer vaccine units at Sandwich will, the company expect, result in further progress, particularly in the field of veterinary biologicals.

ARRANGEMENTS have been completed with Villa Aufricht & Cia, Buenos Aires under which the Albright & Wilson group will provide special equipment, engineering services and technical information in connection with the construction by Villa Aufricht at its Buenos Aires site of a plant for the manufacture of phosphoric acid from phosphorus. The plant is expected to be in operation early in 1962. Villa Aufricht & Cia, which was founded in 1919, is one of the oldest chemical manufacturing companies in Argentina, and includes amongst its present activities the production of a wide range of sodium and other inorganic phosphates, together with chemicals for pharmaceutical and industrial use.

INFORMATION WANTED

The Editor would appreciate information about the following:

Nesmeda (veterinary)
Phalmacide (veterinary)

LEGAL REPORTS

"Forged Prescriptions"

AT Glasgow sheriff court on June 12, Mrs. Jean Gledhill, Wellshot Road, Glasgow, was fined £15 for uttering a forged National Health Service prescription for Preludin tablets. The offence was discovered when a pharmacist observed that the amount originally prescribed by the doctor had been altered from sixty to 160. The doctor confirmed that he was not in the habit of prescribing such a large amount of tablets, and the circumstances were reported to the police. In admitting the offence, Gledhill stated "I wanted to reduce my weight and felt that I would need more than the doctor prescribed."

Fraud and Forgery

AT Glasgow sheriff court, on June 13, Jean Koren Duncan, Barrie Street, Motherwell, admitted four charges of obtaining National Health Service prescriptions by fraud, and one charge of uttering a forged prescription. Police inquiries revealed that the accused had obtained prescriptions from four doctors by entering false particulars on temporary-resident forms. On the fourth occasion she had also altered the number of tablets prescribed from thirty-six to 100. In each case the prescription was for a supply of Methedrine tablets. In placing her on probation for two years, the sheriff said "This is a disgraceful way for a young woman to behave. I am giving you this chance to rid yourself of the bad influences that have made you act in this way."

IN PARLIAMENT

IN the House of Lords on June 15, LORD DOUGLAS referred to the contamination of food by pesticides, herbicides, preservatives and synthetic additives. He thought that the measures taken at the present time were not sufficient to protect consumers and there was a need for labelling that would disclose the contents of foods offered for sale. He considered that aerosols were being sold freely and without any control and there were many substances used in foods that had no nutritional value whatsoever. LORD KILBRACKEN observed "if . . . we are actually purchasing a chemist's shop then we should know that by the label." LORD AUCKLAND in defence of aerosols said that manufacturers took considerable trouble in printing instructions as to how they should be used. LORD STONHAM said the unhappy truth was that in food production the virtually unrestricted use of a multitude of poisons had been permitted. "Our researches should be directed not to poisons which eventually build up resistance in the pests, but to the building up of plant strains which are themselves pest resistant without being a danger to animal and human life.

"It is the same in medicine. Throughout the ages, because of our very understandable desire for life, we have held the art of medicine in awe. Our fears have allowed the doctors to act with imperious authority, cloaking their lack of knowledge in our greater ignorance. Now, of course, we know that it is only in the last quarter of a century that medicine has become a more or less exact science. Yet how the Victorian medicine men thundered their false certainties! We can look back on many of them now as butchers and charlatans. But in their day their authority was unquestioned." LORD HASTINGS, in his reply, said so far there had been no serious outbreak of poisoning from pesticides and herbicides. The Advisory Committee on Poisonous Substances was studying the toxic effects and possible dangers of repeated ingestion of small residues not in themselves enough to cause any symptoms, and a report was expected to be issued this summer.

COMPANY NEWS

Previous year's figures in parentheses

UNITED GLASS, LTD.—Mr. William Reid has been appointed chairman in succession to Mr. L. A. Elgood.

HORLICKS, LTD.—The group has failed to achieve the purchase of 50 per cent. of the share capital of Burt, Boulton & Haywood, Ltd. (see *C. & D.*, June 17, p. 618).

SANITAS "TRUST," LTD. — The company has made an offer to shareholders of Spa Brushes, Ltd. The terms are £1 4s. cash and one Sanitas "Trust" Ordinary share for twelve Spa Ordinary shares.

SMITH & NEPHEW ASSOCIATED COMPANIES, LTD. — Group profit for the twelve weeks to March 25, before tax and minority interests, amounted to £583,000 (£537,000). The balance is before deducting non-recurring items £15,000 (£23,000). Group sales for the period showed an increase of 14 per cent., of which 4 per cent. arose from the inclusion of the sales of the Parazone Company. Provisional allotment letters for the recently proposed one-for-five rights issue of 6,096,218 ordinary 4s. shares at 10s. each will be posted on or about July 7. The issue is to provide some £3 millions for the further development of the company's interests overseas.

THE BRITISH DRUG HOUSES, LTD. — The company announce that they are currently having discussions with Mead Johnson & Co., Evansville, Indiana, U.S.A., with the object of extending and making closer relationships which have existed between the two firms since 1957, covering collaboration in the field of research and the cross-licensing of each other's products. The announcement adds that the discussions may lead to Mead Johnson & Co. taking a financial interest, which could include a minority equity holding, in The British Drug Houses, Ltd., but there is no intention on either side that any such financial interest should involve the making of a take-over bid for B.D.H. or affect its continued independent existence.

BUSINESS CHANGES

INTERNATIONAL FOOT APPLIANCES, LTD., have removed to 345 City Road, London, E.C.1 (telephone: Terminus 7294).

MORITZ CHEMICAL ENGINEERING CO., LTD., are removing to Thames Side, Kingston-on-Thames, Surrey, on July 3.

PERKS & LLEWELLYN, Hitchin, Herts. Miss V. E. Lewis, B.Pharm., M.P.S. (proprietor), has announced that she is closing the pharmacy on June 24.

SANDERSONS (CHEMISTS), LTD., have removed to 23 Boundary Street East, Manchester, 1 (telephone: Ardwick 5848).

THE territorial general manager's office of Boots Cash Chemists (Northern), Ltd., has been transferred to 1 Finkle Street, St. Sampson's Square, York.

WILLIAM MARTIN (CHEMISTS), LTD., have opened new premises at 13 Civic Centre Road, Southampton. To mark the occasion visits were paid by television and stage personalities including Harry Secombe, the King Brothers, Jeremy Hawk and Marion Ryan. Mr. Secombe is a director of the company.

Appointments

FULLERS' EARTH UNION, LTD., Redhill, Surrey, have appointed Dr. A. R. Pinnington their sales manager (development).

CHARLES BEDEMAN, LTD., 180 Queens Road, London, S.E.15, have appointed Mr. Harry Martin their northern field sales manager. He is to be based at Newcastle-on-Tyne.

VINES BIOCRIN, LTD., 222 Harrow Road, London, W.2, have appointed Mr. David C. Thomson their senior representative to the wholesale trade.

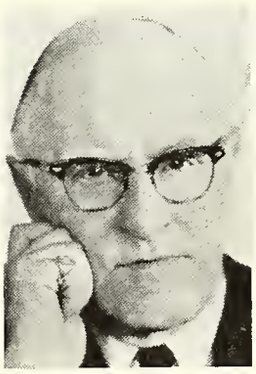
JEYES (SALES), LTD., River Road, Barking, Essex, have appointed Mr. D. R. Piggott marketing manager for the company. Mr. Piggott was previously with Brown & Polson, Ltd.

THOMPSON & CAPPER, LTD., have appointed Mr. D. A. Stoddart, 14 Ridgeway, Fenham, Newcastle-on-Tyne, 4, their representative for South-east Scotland, Cumberland, Westmorland, Northumberland and Durham.

PERSONALITIES

MR. STANLEY M. ATKINS, who is a director of Vines Biocrin, Ltd., has been elected deputy mayor of the borough of Hammersmith.

MR. WILLIAM REID, the new chairman of United Glass, Ltd., has been a director of the company for twenty-four years and chairman since 1955 of its closure-making subsidiary Kork-N-Seal, Ltd. He was a member of the Council of the Scotch Whisky Association from its formation in 1943, and its chairman in 1958. For the previous ten years he has also been chairman of the association's Public Relations Committee.



MR. NORMAN TOPLIS, M.P.S., retires on July 1 after twenty-seven years as manager of the Gorleston, Great Yarmouth, branch of Boots, Ltd. His successor is Mr. J. H. Moore, M.P.S.

MR. FRANK E. MELLOR (home sales manager, Evans Medical, Ltd., Speke, Liverpool, 24), has been made a justice of the peace for the City of Liverpool. Mr. Mellor is vice-chairman of the Liverpool Branch of the Institute of Marketing and Sales Management, and a member of the Liverpool and District Eastern Hospital Management Committee. A keen social worker, he is chairman of the League of Friends of Park Hospital, Liverpool, and secretary of the National Prison Visitors' Association at Liverpool Prison, being also on the Council of the Liverpool, South-west Lancs and North Wales Prisoners' Aid Society.



OVERSEAS VISITS

MR. W. E. LAMB (sales director, Cambridge Instrument Co., Ltd.), has just completed a tour of the North American continent, where he held informal conferences with leading representatives of American industry, in conjunction with Mr. R. H. Kruse (president, Cambridge Instrument Co., Inc., New York).

MARRIAGE

ANDERSON—LILBURN. — At the Tyrone, Northern Ireland, on June 14, Desmond Anderson, M.P.S.N.I., Ardmore, Thomas Street, Dungannon, to Marion Crawford Lilburn, Duncrievie, Dungannon.

DEATHS

CONNOLLY. — On June 6, Mr. Timothy Connolly, M.P.S.I., Main Street, Charleville, co. Cork, Eire. Mr. Connolly, who qualified in October 1914, was a native of Knocklong, co. Limerick. He carried on a progressive retail pharmacy in Charleville for almost forty years. He is survived by his widow and family. The pharmacy will continue to be run by his daughter, Mary, who qualified in 1953.

CRESSWELL.—Recently, Mr. Alfred G. Cresswell, aged ninety-four. Mr. Cresswell was director of the original firm of Cresswell Brothers, sponge importers, who were established in Red Lion Square, W.C.1, in the late nineteenth century.

DAVIES.—On May 24, Mr. Thomas Cerdin Davies, M.P.S., 35 Elaine Crescent, Newport, Mon. Mr. Davies qualified in 1938.

FERGUSON.—On May 15, Miss Margaret Ferguson, 2 Menteith Road, Port of Menteith, Stirling. Miss Ferguson qualified as a chemist and druggist in 1926.

HILL.—On May 19, Mr. Cyril James Hill, M.P.S., 8 Station Road, Knowle, Solihull, Warwicks. Mr. Hill qualified in 1926.

NEW COMPANIES

P.C. = Private Company; R.O. = Registered Office

PLOUGH GREEN PHARMACY, LTD. (P.C.).—Capital £3,000. Directors: Norman G. Yeo, M.P.S., and Barbara M. Yeo. R.O.: 364 Malden Road, Worcester Park, Surrey.

PRINCE CHEMISTS, LTD. (P.C.). — Capital £100. To carry on the business of consulting and general chemists, etc. Directors: John Steiner and Christine H. P. Steiner, M.P.S. R.O.: 340 Harrow Road, London, W.9.

A. J. McWATERS & CO., LTD. (P.C.).—Capital £6,000. To carry on the business of manufacturing and dispensing chemists, etc. Directors: Arthur J. McWaters, Clifford Orrell, M.P.S. R.O.: 23 Hanover Street, Liverpool.

RAYMOND ALLSOPP, LTD. (P.C.).—Capital £6,000. To carry on the business of chemists, etc. Directors: Raymond Allsopp, M.P.S., and Joan M. Allsopp. R.O.: 53 Market Street, Kingswinford, Staffs.

E. STEWART BROWN, LTD. (P.C.).—Capital £1,000. To carry on the business of chemists, etc. Directors: Edward S. Brown, M.P.S., and Joan M. Brown. R.O.: 70 The Highway, New Inn, Pontypool, Mon.

WYLAM (CHEMISTS), LTD. (P.C.).—Capital £10,000. To carry on the business of chemists and druggists; opticians, etc. Directors: Frederick A. Wylam, M.P.S., Margaret Wylam and Richard J. Knibb, M.P.S. R.O.: 4 Church Street, Wingate, co. Durham.

SOLVENT RECOVERIES (WIMBORNE), LTD. (P.C.)—Capital £100. To carry on the business of consultants and commercial and technical advisers in connection with the manufacture of pharmaceutical preparations, solvents, etc. Directors: George H. Osborn and Teresa M. Osborn (directors of Industrial Suppliers (Wimborne), Ltd.). R.O.: Sussex Chambers, 8 Havelock Road, Hastings.

CHISSICK CHEMICAL CO., LTD. (P.C.).—Capital £100. To carry on the business of chemists, druggists, etc. Directors: Seymour S. Chissick and John A. Bluestone. R.O.: 45 Osborne Road, London, E.7.

R. WESTON (CHEMISTS), LTD. (P.C.).—Capital £5,000. To carry on the business of chemists, etc. Directors: Ralph Weston, M.P.S., and Hilda S. Weston. R.O.: 354 Langsett Road, Sheffield.

MARK GOLDBLATT, LTD. (P.C.).—Capital £1,000. To carry on the business of consulting, analytical and general chemists, etc. Marcus Goldblatt, M.P.S., is the first director. R.O.: 185 Burnham Avenue, Llanrumney, Cardiff.

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

A Correction

SIR,—I think I ought to draw your attention to a somewhat unfortunate misprint at the end of my letter (*C. & D.*, June 17, p. 624). In the last quotation from Mr. Graham's speech, where he said "We must stick together," the printer has rendered the phrase as "we must strike together"—probably as a result of my bad writing. Mr. Graham was at pains earlier to make it clear that no strike was contemplated. "He did not mean," he said, "a complete withdrawal from the service."

VETERAN

"Notional" Prices for Drugs

SIR,—In your leading article in last week's issue (p. 625) you refer to the introduction of "notional" prices into the Drug Tariff. Those prices are based on average rates for past purchases, large or small, and do not correspond to manufacturers' current list rates. Retail pharmacists have hitherto been able to buy their drugs in Drug Tariff quantities at Drug Tariff prices. Since "notional" prices are related to average quantities — which, in the main, are higher than those now specified in the "basic price" column of the Tariff, it will be apparent that manufacturers cannot be expected to supply at the "notional" rates. That is fully appreciated by the Central N.H.S. (Chemist Contractors) Committee, but we wish to explain that fact to your readers so that misunderstanding between them and their suppliers may be avoided.

A. DUCKWORTH, *Secretary*,
Association of British
Pharmaceutical Industry,
London, W.C.1

How to Achieve Unity

SIR,—Is the thought of a united pharmaceutical profession just a fallacy or could it become reality? I believe it could. All that is required is a little extra punch, exercised as a power additional to those already there, which the Statutory Committee has at its disposal. To have to advocate the use of force to a professional body such as ours, in order to achieve the unity for which we yearn, is a bitter pill to swallow but, if we are to attain from the Minister of Health a remuneration befitting our professional status, then swallow it we must. The Society, through the Statutory Committee, has the power to remove from the register, either the name of a pharmacist, or the premises from which he conducts his pharmaceutical service, in cases of professional misconduct. Professional misconduct is a loose phrase, and it could easily apply to persons who go against the wishes of the majority—for example, rota breakers, the people who place in jeopardy a rota service that has been successfully operating for a number of years by opening — often for later hours—when they should be shut; or persons who, where the majority wish to form a rota service, refuse to co-operate, and thus prevent the wishes of the majority from taking effect. If, by utilising the weapon I suggest, we can achieve unity at a local level, it naturally follows that we could also achieve solidarity on a national level. For pharmacy to be so completely united, the price to pay is infinitesimal for the only people who could possibly complain would be those who are causing all the trouble. Others may agree with me, but unless we all bestir ourselves, not leaving it to the chap down the road, who may be equally apathetic, then we are making ourselves responsible for our own plight. My call is for unity, but it requires the full co-operation of everyone. A profession solidly united would prove itself to be an opponent that even a Minister of Health would hesitate to challenge.

ROY BARKER,
Ashton-under-Lyne

The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

ESTABLISHED 1859

Published weekly at

28 Essex Street, Strand, London, W.C.2

TELEGRAMS: "CHEMICUS ESTRAND, LONDON"

TELEPHONE CENTRAL 6565

Prescription Costs in Perspective

ANOTHER large contractor under the National Health Service has joined Mr. G. I. Rushton (chairman, Timothy Whites & Taylors, Ltd.) (see *C. & D.*, May 20, p. 518) in declaring that there has been a decline in the number of prescriptions presented for dispensing during the period since the levy was doubled on March 1. The latest to do so is Boots Pure Drug Co., Ltd., whose chairman (Mr. Willoughby R. Norman) in discussing with the financial Press on June 15 his first annual statement since being appointed to that office, said that there had been an immediate falling-off of prescriptions, though to what extent it was too early to say. Another effect of the increased levy, said Mr. Norman, had been that large quantities of medicines were being prescribed, so that the value per item had been raised compared with that of a year ago. That outcome of the raised levy is, of course, a logical one that follows the pattern set when the levy was first applied and again when it was applied per item instead of per form. When Mr. Norman was asked about that point, and whether he thought the Chancellor's objects were being circumvented, he made it plain that the fall in prescription numbers, greater than was expected by the Minister if not so great as had been suggested by some contractors, would outweigh any rise in prescription values arising from the larger quantities now being prescribed.

Another point made by Mr. Norman was that the dispensing side was the least profitable of all chemists' activities, which include, so far as his company is concerned, fiercely competitive export business.

The more such sentiments are driven home to the general public the better. Maybe in time those statisticians at the Ministry of Health to whom we referred last week (p. 626), and those guardians of the nation's purse (the Committee of the Public Accounts, which incidentally celebrated its centenary on June 14), will come to realise that "any suggestion that great profits can be derived from supplying drugs to the National Health Service is wide of the mark." As Mr. Norman further remarked in his published statement (see *C. & D.*, June 17, p. 618), "The Government is getting the business done not only efficiently and economically but at a lower cost than was possible in any other way."

Mr. Norman has done the dispensing chemist a good turn in public relations, first by so forthrightly stating the position, and secondly by taking steps to get the facts widely published. Most of the National newspapers picked them out for special mention.

Luxury Diet

ONCE again we have gone outside the day-to-day concerns of the practising pharmaceutical chemist for the subjects of the *C. & D.* Annual Special Issue, which has become a tradition, if a lively one, in pharmaceutical journalism. Our concern is here rather with the pride the pharmacist may justly take in his professional ancestry, with the esteem in which pharmacists are held by other sections of the community, and with progress in allied sciences and technologies that can hardly fail to evoke a response in the pharmaceutically trained.

The quotation from Sir Winston Churchill with which Dr. Nelson, of the University of Leeds, opens his article (p. 677) on British College Pharmacopœias might well be taken as describing the principle that has underlain the whole series of A.S.I.'s. We hope this year's production will be held worthy of taking its place in the succession.

Pharmaceutical Society of Northern Ireland

MONTHLY MEETING OF COUNCIL

A MEETING of the Council of the Pharmaceutical Society of Northern Ireland was held in Belfast on June 15, the president (Mr. A. Templeton) in the chair. Also present were Messrs. R. M. Watson (treasurer), W. H. Boyd, N. C. Cooper, M.Sc., W. P. Ewart, J.P., B. Flatley, J. Gordon, W. T. Hunter, J. Kerr, G. E. McIlhagger, W. C. Tate and Dr. H. J. Cronhelm. Apologies for absence were received from Professor O. L. Wade, M.D., Dr. R. G. R. Bacon, H. G. Campbell, S. E. Campbell, W. S. Hall, D. Moore, F. R. Moore, J.P., H. F. Moore and W. J. Thornton.

THE PRESIDENT said they were pleased to welcome back Mr. Ewart after his holiday in Rhodesia, and MR. EWART said that he had much enjoyed his visit and had been pleased to renew friendships with many Northern Ireland pharmacists now living in Rhodesia.

THE PRESIDENT said they were all greatly shocked to learn of the sudden death of Mr. Gordon Rattray, who had for a number of years been on the Society's board of examiners. Apart from his visits to Belfast they had enjoyed Mr. Rattray's company at various meetings of the British Pharmaceutical Conference. THE SECRETARY said that he had already conveyed to Mrs. Rattray the sincere sympathy of the president and members of the Council.

Arising out of a letter from the chairman of the Statutory Committee, it was agreed that the Society's solicitor should be asked to write to the Ministry of Commerce about the names of companies formed to carry on the business of pharmaceutical chemist. THE SECRETARY also read a letter from the Society's solicitor concerning the Council's authority to restore to the register names removed for non-payment of retention fee.

A memorandum on pharmaceutical education in Northern Ireland was submitted by MR. COOPER. It was agreed that the Education Committee should discuss the memorandum and decide what further action should be taken.

A report on the recent careers exhibition in the King George VI Youth Centre, Belfast, was submitted, and several members complimented Mr. Cooper on the pharmacy stand. MR. COOPER said they were greatly indebted to Burroughs Wellcome & Co. and to Evans Medical, Ltd., for material for the stand. The tablet machine loaned by Messrs. Evans had proved a great attraction. He was also grateful to those who had helped to staff the stand throughout the week. It was agreed to hold the ceremony of presenting certificates and prizes on July 20, and that the Council meeting should be held after the ceremony.

Pharmaceutical Society of Ireland

MONTHLY MEETING OF COUNCIL

MANUFACTURERS of ethical veterinary preparations are being asked to consult the Council of the Pharmaceutical Society of Ireland before deciding on the channels of distribution for their products. That decision was reached at the monthly meeting of the Council in Dublin on June 13, when the matter was raised by MR. R. J. POWER, who had also referred to it at the previous meeting.

MR. POWER said that, as an ethical, statutory body, the Society should be consulted by manufacturers of vaccines in regard to distribution. Basically the matter was not a trade but a professional one, and the manufacturers should at least afford the Council an opportunity of expressing an opinion on the question of distribution.

A Policy Pharmacists Could Not Accept

MR. J. P. O'DONNELL said the tradition was that all veterinary products were available to pharmaceutical chemists excepting for a few restricted lines. The Council should make it clear that, if a product was available as a veterinary product, it ought to be made available to pharmaceutical chemists. Already the Council had indicated that it would not tolerate the restriction of those commodities to veterinary surgeons. He understood that two manufacturers had introduced products that were confined to veterinary surgeons. It was time the Council again made it quite clear to manufacturers that such a policy was not acceptable to pharmaceutical chemists. MR. J. J. O'REGAN said it was time the Council adopted a firm attitude towards those manufacturers who were seeking to limit the distribution channels of their products. They should tackle the matter in an emphatic manner and, if satisfied that any manufacturers were discriminating against pharmaceutical chemists in the sale of their products, should publish the names of those makers to all chemists throughout the country. Such firms were depending on over 1,000 chemists to support them, and it was time that that was made clear to them.

MR. POWER said that most firms were co-operative, and he thought the best thing to do would be to write to the various manufacturers pointing out the Council's feelings in the matter.

MR. G. C. O'NEILL said he would not be in favour, at the present stage, of publishing the names of manufacturers who were discriminating against chemists. It would be " jumping the gun " to do so.

MR. O'REGAN said they must have dedicated people in pharmacy in order to raise the standard of the profession. If they were to do so they must be prepared to make sacrifices by declining to stock the products of any offending firms. If they allowed a trend of discrimination against pharmacists to develop it would be only a short step to attempts to apply the same discrimination to medical preparations. The proper channel of distribution for all those products should be through the pharmacists, who were fitted by training to handle them. The Council should write to the firms concerned pointing out that pharmacy strongly deprecated the action of those manufacturers, and hoped that in the future they would make their products freely available to pharmacists.

MR. R. J. SEMPLE said that pharmacists were slow to make protests either individually or as a body, and it was time that they became more active in that respect. Unless they adopted a more aggressive attitude they would be cut out of everything. If pharmacists attempted to sell groceries, the grocers' organisation would soon protest, yet grocers were allowed to stock lines that should be confined to chemists, and no effective action, declared Mr. Semple, was being taken to prevent it.

MR. R. J. POWER said they should bring it home clearly to manufacturers that they deplored and resented any policies of by-passing pharmaceutical chemists, particularly in view of the fact that decisions in regard to the distribution of certain products were taken only after consultation with veterinary interests. That, to him, was a great cause of resentment, and he felt that, as a statutory body, the Council should be consulted. The fact that a firm decided to confine its products to veterinary surgeons could possibly have an effect on the mind of a Minister for Agriculture that might be to the detriment of pharmaceutical chemists. A Minister, anxious about the country's cattle industry, might conceivably be influenced if it should ever come about that prescriptions from veterinary surgeons should not be compounded by pharmaceutical chemists. A Minister for Agriculture might then be slow to support the sale by pharmacists of those vaccines in case he might consider it a potential danger to the cattle industry.

At the outset MR. G. C. O'NEILL, who presided in the unavoidable absence of the president (Mr. F. Loughman, T.D.), said it was his unpleasant duty to have to propose a vote of sympathy with Mr. F. J. Robinson, an esteemed member of the Council, on the unexpected death of his wife. The vote was passed with all members standing in silence.

Anxiety Over Tranquillisers

THE REGISTRAR (Mr. J. G. Coleman) said he had received a reply from Mr. R. R. Yates Hale (secretary, Dublin Newspaper Managers' Committee) in regard to the anxiety expressed at the previous Council meeting relating to the elaborate advertisement in the national daily and weekly newspapers of " pep " pills and tranquillisers, and the possible harmful effects such advertisements might have on certain readers. Mr. Yates Hale pointed out in the letter that editorial policy was entirely an individual matter for the newspaper industry. Any criticism of the journalistic activities of a newspaper would have to be directed to the attention of the editor of the particular journal. As regarded medical advertisements, the letter stated that the Irish newspaper industry operated within the code of standards laid down by the Department of Health, and members of the Committee would be grateful if any inadvertent breach of this code were brought to their attention.

On the motion of MR. O'NEILL it was agreed to procure a copy of the code of standards from the Department of Health. MR. M. POWER asked what the position was in regard to imported Sunday newspapers, and handed in an advertisement for tranquillisers in one such journal which, he said, would be tempting to anybody seeking relief but who did not know the possible danger attached to taking such tablets. MR. O'NEILL said they would be in a better position to know where they stood after they had received a copy of the code of standards.

Poisons Council Nominations

THE REGISTRAR reported that he had received a letter from the Department of Health stating that the Poisons Bill had now become law, and pointing out that, in accordance with the provisions of section 4 of the Bill, the Minister was now considering the appointment of members to the Council that was to be set up under the Bill. Accordingly the Minister requested to be furnished with the names of members of the Council from whom he would appoint two to the Council on being satisfied that they had complied with the necessary conditions for membership (registered for a period of not less than ten years; occupation either the carrying on of business as a pharmaceutical chemist, or employment as a pharmacist). THE REGISTRAR intimated that he would furnish the names of the eligible members to the Minister.

(To be concluded)



Where Pharmacy is ROYAL

A glimpse of some of the pharmaceutical riches of SPAIN

T. D. WHITTET,
B.Sc., Ph.D., F.P.S., F.R.I.C., D.B.A.
First British holder of the medal of the Royal Spanish Academy of Pharmacy

RICH in pharmaceutical tradition, Spain has many historic old pharmacies, as well as several museums devoted to pharmaceutical history, in which are magnificent collections of drug jars, mortars and pharmacy fittings and apparatus. During a visit to Spain the writer was privileged to visit several of them, as well as the famous Madrid Botanical Gardens. No article can do justice to these splendid collections, but I hope these notes will serve to bring them to the attention of British pharmacists who intend to visit Spain.

Museum of the History of Spanish Pharmacy

The Museum of the History of Spanish Pharmacy, Madrid, is situated in the faculty of pharmacy in the University City on the outskirts of the city. It was founded through the enthusiasm of the late Dr. Folch Andreu, the first professor of the history of pharmacy, with the help of General Dr. Raphael Roldan, president and former secretary of the Spanish Society for the History of Pharmacy and a former assistant professor in the faculty of the history of pharmacy. Those two devoted historians made a collection of pharmaceutical objects of historical interest, obtaining some by gift of many Spanish pharmacists, some through the meagre funds available to the faculty for the purpose, and the remainder by purchasing them at their own expense.

At the first Spanish-Portuguese Pharmaceutical Congress they arranged an exhibition consisting mainly of a reconstruction of the pharmacy of the Tavera Hospital and various show cases of drug jars, mortars and other pharmaceutical apparatus. When the new faculty of pharmacy was constructed in the University City, a permanent site was obtained and a splendid collection of old pharmacies and other exhibits was constructed. Some of them are the authentic materials reassembled in the museum, similar to the historical pharmacies now on show at the Wellcome Historical Medical Museum in London. Others are cleverly devised reconstructions. An alchemist's den, made as authentic as possible, is based on those of other museums and on famous paintings of alchemists, especially those of David Teniers.

In the central room there are many displays of drug jars from many countries and several centuries, including Arabic ones of the fourteenth and fifteenth centuries, some of them very beautiful. The best collection came from the monastery of El Escorial, Alcara. Another showcase contains a collection of flasks and bottles of medicaments of the eighteenth century from the pharmacy of the monastery of St. Domingo de Silos, from which also came the finest collection of mortars in the museum. One mortar dates back to the tenth century.

There are also cases of flasks, retorts and other pieces of alchemical, chemical and pharmaceutical apparatus, including an early eighteenth-century tablet machine. A display of lettered and decorated circular vessels came mainly from the pharmacy of the College of San Fernando. Among several magnificent drug cases is the one illustrated on p. 652. Another collection of especial interest is that of old medicaments including "unicorn's horn" (actually elk horn), stag's eyes, rhinoceros horn, etc. Samples of powder and electuary of the great theriacum were prepared for the museum by the pharmacists of the Faculty.

Among the valuable old books on show are a copy of the first Madrid Pharmacopœia, a prescription book of 1783, and books by the English alchemist Raymond Lulley and the Dutch physician Boerhave.

A collection of paintings contains many splendid representations of Cosmos and Damien and portraits of eminent Spanish pharmacists, including many formerly associated with the Madrid faculty. There are also illustrations of pharmacies and ceramics of great artistic value. A curious collection is that of amulets, some being figures from Spanish Guinea.

In one display are the regalia of a student for his graduation. He wears a special elaborate uniform and is given a pair of gloves, a pharmacopœia, a tasselled hat and a sword for the defence of science. He takes an apothecaries' oath, similar to the Hippocratean. Also associated with the



The eighteenth-century pharmacy of the Catalan town of Torredembarra reconstructed in the museum of Spanish pharmacy in the faculty of pharmacy, University of Madrid.

display are lists of important posts held by former students of the Faculty and cases of sporting trophies won by them. There are also relics such as medals, decorations and portraits of pharmacists of the past, including the famous biochemist Dr. Carricado, who received the Grand Cross of Alphonse XII.

Much the largest part of the museum consists of the reconstructed pharmacies, some of which, especially the early Arabic ones, are most colourful. One dates from the fifteenth century. Another is the sixteenth-century village pharmacy of Leon. A particularly fine one is the pharmacy of the Catalan town of Torredembarra, dating from the eighteenth century. Perhaps the finest of the reconstructions is the model of the Tavera Hospital at Toledo. I visited the original of that and will describe it later.

One of the proudest possessions of the Museums is the first photograph ever taken in Spain. It was taken by the daguerrotype process by the professors of pharmacy, Drs. Pou and Camps, along with the science professor Dr. Graells, and it shows a view of the National Palace. The museum still retains an interest in photography, for there is established a service of reproduction of pictures of historical interest. The collection is now under the care of Professor Folch Jou, son of the founder and joint author with him of a comprehensive book on the history of pharmacy.

Museum of Military Pharmacy

A second museum, the Museum of Military Pharmacy, also owes its origin to the enthusiasm of General Dr. Raphael Roldan, who obtained premises in the extensive headquarters of the Corps of Military Pharmacy in the Central Park of Military Pharmacy and there assembled the wealth of pharmaceutical antiques belonging to the Corps. They came mainly from the military pharmacies of Alicante, Ceuta and Valladolid.

Practically the whole of the Ceuta "botica" (apothecaries' shop) has been reassembled as it was originally. It has a big collection of colourful drug jars, some of which are exceptionally large and bear handsome coats of arms. In one corner there is a large bronze mortar of the eighteenth century, and on the central bench are authentic samples of medicaments such as benzoar stones and terra sigillata. The floor and some of the walls are covered with gaily coloured tiles, and on one wall is hung a row of portraits of famous pharmacists.

Another reconstruction is an iatrochemical laboratory of the seventeenth century, containing a model of an alchemist seated at a table reading an ancient book. The room is reminiscent of the pictures of David Teniers. It has a vault-like appearance, with the floor, walls and ceiling of large plain tiles. In one corner is a brickwork furnace typical of the age, with a large cowl flue above it. On the furnace are huge retorts of green glass with long necks protruding into large round green-glass receiving vessels. In the vault of the roof an alligator hangs, and an owl is flying over the furnace. On the walls are alchemical pictures and pieces



A view of part of the alchemist's laboratory at the museum of Spanish pharmacy.

of apparatus. A metal stand like a church lectern and holding an ancient manuscript is surmounted by a large candle in a holder. Scattered around the floor are many other pieces of apparatus of earthenware and bronze. The lighting is particularly effective, having been made to appear as realistic as possible. Thus the furnace glows red and the candles and lamps are lit. The laboratory is said to be similar to the actual one organised by Victo Cotaldo, the Apothecary Royal, in the Royal Pharmacy in 1693.

Another room contains showcases of drug jars of the seventeenth and eighteenth centuries from military pharmacies, and there are also many cases of various types of apparatus and equipment. Another section contains models dressed in the uniforms of high officers of the Corps through several centuries, and there is a splendid collection of oil paintings of portraits of famous men associated with the Corps, former high officers, and members of the Corps who were killed in battle.



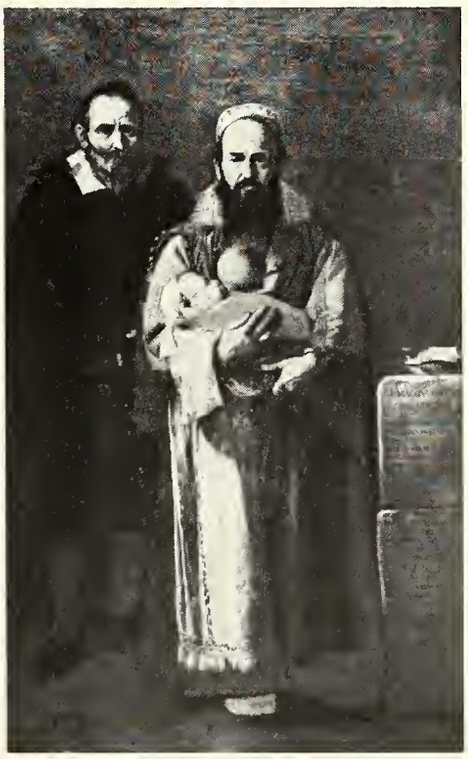




Some of the metal mortars of the collection in the museum of Spanish pharmacy.

An extensive bibliographical section contains many priceless documents relating to the history of Spanish military pharmacy, including numerous books and manuscripts published by members. The military pharmacists appear always to have taken a prominent part in Spanish pharmacy and science, and several have become members of various Royal Academies.

The historical treasures of the Corps undoubtedly have a worthy setting and General Dr. Roldan has done a great service to pharmacy in general and to the military Corps in particular in establishing a permanent exhibit of this kind.



The bearded woman, a painting by Jose de Ribera in the museum of military pharmacy.



General Dr. Raphael Roldan (Secretary of the Spanish Society for the history of pharmacy and founder of the museum of the history of military pharmacy).

Tavera Hospital, Toledo

Toledo, the ancient capital of Spain, must be one of the most romantic cities in the world, situated as it is on a huge craggy hill in a bend of the river Tagus, which flows round it on three sides in a deep ravine. Much of the original wall across the peninsula and some of the gates remain. The city itself retains much of its mediæval appearance. Near the outskirts of the city is the Tavera Hospital, founded by Cardinal Tavera in 1541. It is now a girls' boarding school, staffed by nuns, but many parts of it remain unchanged since its foundation.

The pharmacy of the Hospital is truly magnificent. Along two sides are shelves with splendid coloured drug jars of many shapes and sizes as well as other glass and earthenware vessels. At one end a set of drug drawers, the finest I have ever seen, is incorporated in a cupboard that has lattice-work

doors. An exquisitely coloured coat of arms of one of the various provinces of Spain is painted on the front of each drawer with the name of the drug. There are also many wooden drug cases, some of which have exquisite oil paintings on them, fine mortars, balances and other pieces of apparatus.

The library is fabulous. It contains every record of the hospital since its foundation in 1541, and made me realise what priceless treasures England must have lost through the dissolution of the monasteries. I was privileged to examine some of the earliest books — beautifully handwritten manuscripts bound in leather. They contain all the accounts of expenditure on food, wine, drugs, etc., and Professor Bustinza, who was my guide, remarked that the monks apparently spent much more money on wine than on drugs. Among the diseases mentioned are fever and migraine. The cure for the latter was to slit open a live pigeon and apply its entrails to the head. Lizards were among the other strange and sometimes revolting remedies mentioned.



A section of the reconstructed sixteenth-century pharmacy of the Tavera hospital at the museum of Spanish pharmacy.

The library contains the death mask of Cardinal Tavera and many fine paintings. Several of the collection were slashed by anti-Franco soldiers during the Civil War, some beyond repair, but that of the Cardinal himself has been skilfully restored. The elaborate guest rooms have been left as they were in the sixteenth century and are in such a good state that they appear almost new. They include even the furniture and bed clothes. A huge chest contains the Cardinal's vestments, which are still in perfect condition after more than 400 years. A twelfth-century cross hangs on one of the walls.

Among the pictures is a remarkable one of outstanding endocrinological interest. It is *La Mujer Barbuda* (The Bearded Woman) by Jose de Ribera, a famous Spanish painter, often known as El Espagnola. The subject of the painting was Magdalena Ventura, a native of the Abruzzi in the Kingdom of Naples. She was apparently perfectly normal until the age of thirty-seven. She married at an early age and had three children by her first husband. After his tragic death she grew a beard and moustache. Some years later, however, she married again and had four children by her second husband. In Ribera's painting she is shown with her second husband, Félix, suckling her last child, born when she was fifty-two years of age. When this woman was presented to the Viceroy of Naples (the third Duke of Alcalá), he was so struck by her appearance that he commissioned Ribera to make the portrait in 1631, so as to bring this extraordinary case to the knowledge of King Philip III. The woman died on September 2, 1652, at the age of seventy-three, and a post-mortem showed that she had marked adrenal enlargement. What seems so extraordinary is her remarkably masculine appearance, quite apart from the beard, as shown by the shape of her face. Her hands, too, have a masculine appearance. A reproduction of the painting is to be seen on p. 651. The painting depicts tablets on which the woman's story is told.



Reproduction of an eighteenth-century pharmacy in the museum of the history of military pharmacy.



Gate commemorating Carlos III, founder of the Botanical Garden, Madrid.



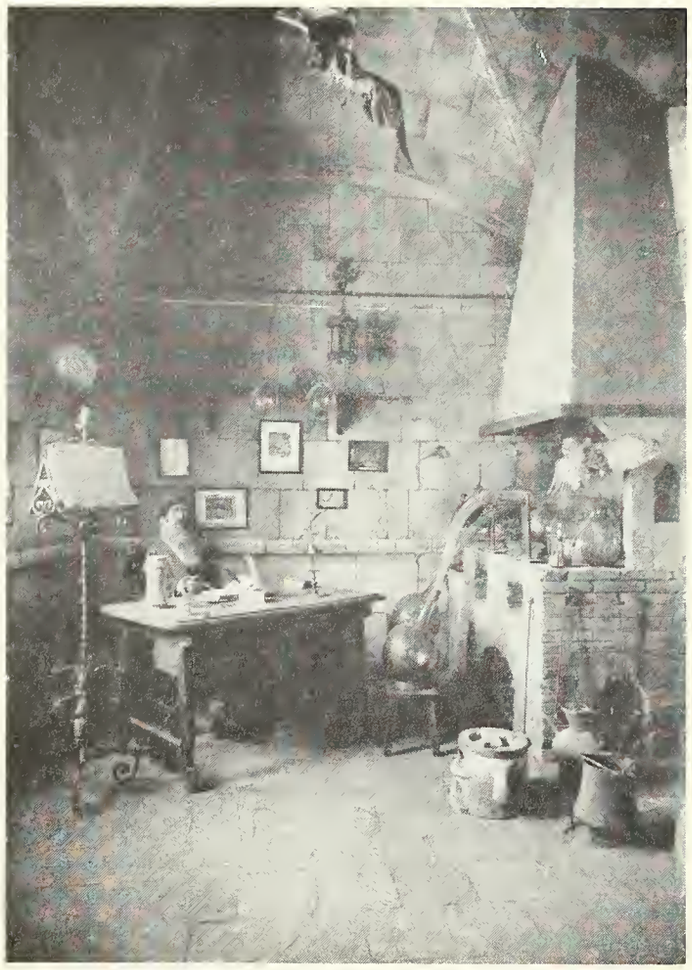
An arbour at the Botanical Garden, Madrid.



Illustration at the Botanical Garden of the botanical parts of the species Pettiflora mariquitentis.



Illustration, at once botanical and decorative, of an item in the Mutis collection at the Botanical Gardens.



A seventeenth-century iatrochemical laboratory at the Museum of Military Pharmacy.

Royal Spanish Academy of Pharmacy

The Royal Spanish Academy of Pharmacy, founded as the Brotherhood of the Apothecaries of Madrid in 1589, must be one of the oldest surviving pharmaceutical societies with a continuous existence. A brief account of its history appeared in THE CHEMIST AND DRUGGIST, July 16, 1955, p. 70. The Academy's headquarters consists of a suite of rooms in Campoamor in the centre of Madrid, which also house the Spanish Society for the History of Pharmacy. The office contains the flags of all the foreign members and has paintings and plaques of famous pharmacists.

The *salón de actos,* or conference room, is most impressive. Its walls are richly decorated with red velvet upholstery, which also covers the table on a raised dais at the top of the hall. Above the elaborate president's chair is an oil painting of one of the early apothecaries. Other portraits are on the side walls, on which also are several ornate chandeliers.

Below the official dais are two rows of red and gold upholstered seats for the academicians, facing each other as in the House of Commons. Between them is a gaily coloured carpet. A wrought-iron gilded rail separates the seats of the academicians from the public seats, again reminiscent of the Bar of the House of Commons.



Council chamber of the Royal Academy of Pharmacy of Madrid at the inaugural meeting of the 1960–61 session.



The permanent secretary (Dr. Toribio Zuniga), in his office at the Royal Academy of Pharmacy of Madrid, with the flags of the nations in which there are correspondents of the Academy.

The Madrid Botanical Gardens

The present botanical gardens in Madrid date from 1781. The older Jardin Botanico del Soto de Migas Calientes, which had been established in 1755 on a different site, had already achieved fame as a scientific centre at which the distinguished apothecary-botanist professor Juan Minuart discovered a large number of species of plants, and the genus Cerviana (Minuart), indeed, are called after him. The assistant director, José Hortega, corresponded with Linnaeus, sending him engravings and notes. When the new gardens were opened on their present site beside the Plaza de Murillo and the Paseo de Prado, the main gate in the Plaza de Murillo was named the Carlos III Gate in honour of the then king. C. G. Ortega became the first director, holding the post for thirty years. Ortega, one of the outstanding Spanish men of science of the nineteenth century, qualified both in medicine and pharmacy in 1762, and the period of his directorship of the gardens was the greatest in their history. He was also responsible for the appointment of several chairs of botany.

In 1834 a herbarium and library were established that contain the wonderful Mutis collection of dried plants and of engravings, mainly of American plants. Today, unfortunately, little money appears to be available for the upkeep of the gardens and they have a somewhat neglected air, though the present director, a mycologist, and a small but devoted band of gardeners, are doing excellent work in discouraging circumstances.

ACKNOWLEDGEMENTS—The author writes: I wish to thank Professor Dr. F. Bustinza, my kind host during my visit to Spain, for making the arrangements for all these visits. I am also grateful to Gen. Dr. Roldan and Col. M. Rivera for showing me the Military Museum, to Professor Folch Jou for the visit to the Museum of the History of Spanish Pharmacy, and to Dr. T. Zuniga and the members of the Royal Academy of Pharmacy for their hospitable reception on my visit to the Academy. Professor Bustinza, Gen. Roldan, Professor Folch Jou and Dr. Zuniga supplied me with photographs, and I am grateful for their help in that respect also.

PHARMACY AND OPERA

JOHN K. CRELLIN

IN literature, the pharmacist's responsible rôle in society has implicated him in every variation of criticism, satire and recognition.[1] He features, too, in a small number of opera librettos, though generalisations from them are unprofitable by reason of their varied genre and contrasting national characteristics.

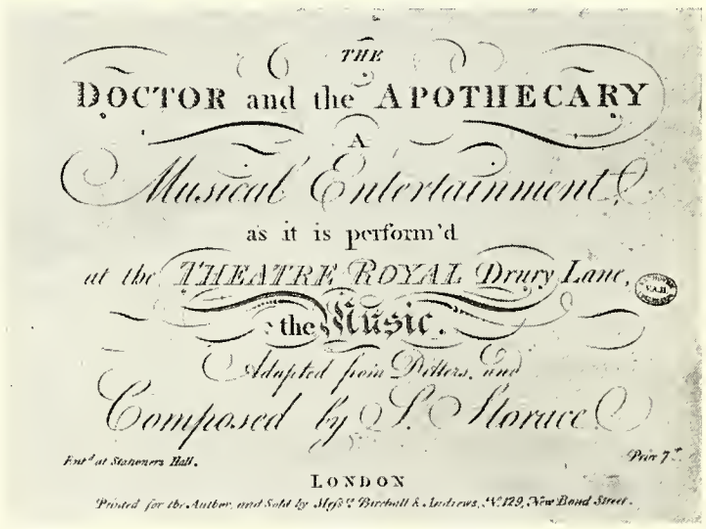
Pride of Place

The practitioner of pharmacy entered light opera in the eighteenth century, when it was increasing in popularity and becoming—by contrast with the classical themes of much grand opera—preoccupied with everyday characters.

Possibly the first example of a "pharmaceutical" opera, apart from a comedy ballet by Giovanni Lulli, *Monsieur de Pourceaugnac* (1669) *[2], is *Lo Speziale* (1753), composed by V. Pallavicini and D. Fishietti. The libretto, written by the renowned Italian librettist C. Goldoni, has, however, become more widely known through being used by Joseph Haydn for his popular opera *Lo Speziale* (*or Der Apotheker*) 1768. The situation of an ageing bachelor wishing to marry his ward is common in Italian light opera and here the apothecary, Sempronio, desires to marry his ward Grilletta. A young fop Volpino, and the timid pupil Mengone, also vie for her hand. True love wins in the end and Sempronio consents to the marriage of Grilletta and Mengone. The popularity of the opera is undoubtedly due to Haydn's music. Geiringer considers "this piece one of the most attractive numbers of ensemble music in the pre-Mozart *opera buffa*."[3] To the pharmacist, a highlight of the opera might well be the unmistakable sounds with which Haydn illustrates a discourse on the palliative effect of rhubarb on constipation. Musically minded pharmacists themselves, notably in Germany and Switzerland, have provided the incentive in staging the opera in recent years.[4] A recent television performance in Germany provided a setting far from that graphically pictured by Sonnedecker in his description of the first performance of the opera, in which he said that it "echoed through the halls of a new castle that Haydn's prince, Nicholas the Magnificent, had built to rival the Palace of Versailles in France—even though he already owned twenty-one other castles. Here Prince Nicholas maintained a private entourage of musicians headed by Haydn, who not only composed but also produced and conducted the weekly performances of operas, orchestral works, and chamber music."[4]

The text of Christian Gottlob Neefe's opera *Die Apotheke* (1771), is by J. J. Engel, but again it owes much

* The dates given refer to the first performance of the work.



THE
DOCTOR and the APOTHECARY
A
Musical Entertainment
as it is perform'd
at the THEATRE ROYAL Drury Lane,
the Music
Adapted from Ditters, and
Composed by S. Storace

Engrav'd at Stationers Hall. Price 7s.

LONDON

Printed for the Author, and Sold by Mess.rs Birchall & Andrews, N.o 129, New Bond Street.

Title page of the score and, below, a Press advertisement of the first English performance of "The Doctor and the Apothecary," introduced to the programme as a supplement to a main feature, "The West Indian".

DRURY-LANE.

AT the Theatre-Royal, in Drury-Lane,
This present Saturday, October 25, 1788,
THE WEST INDIAN.

To which will be added (never performed) a New Musical Entertainment, called

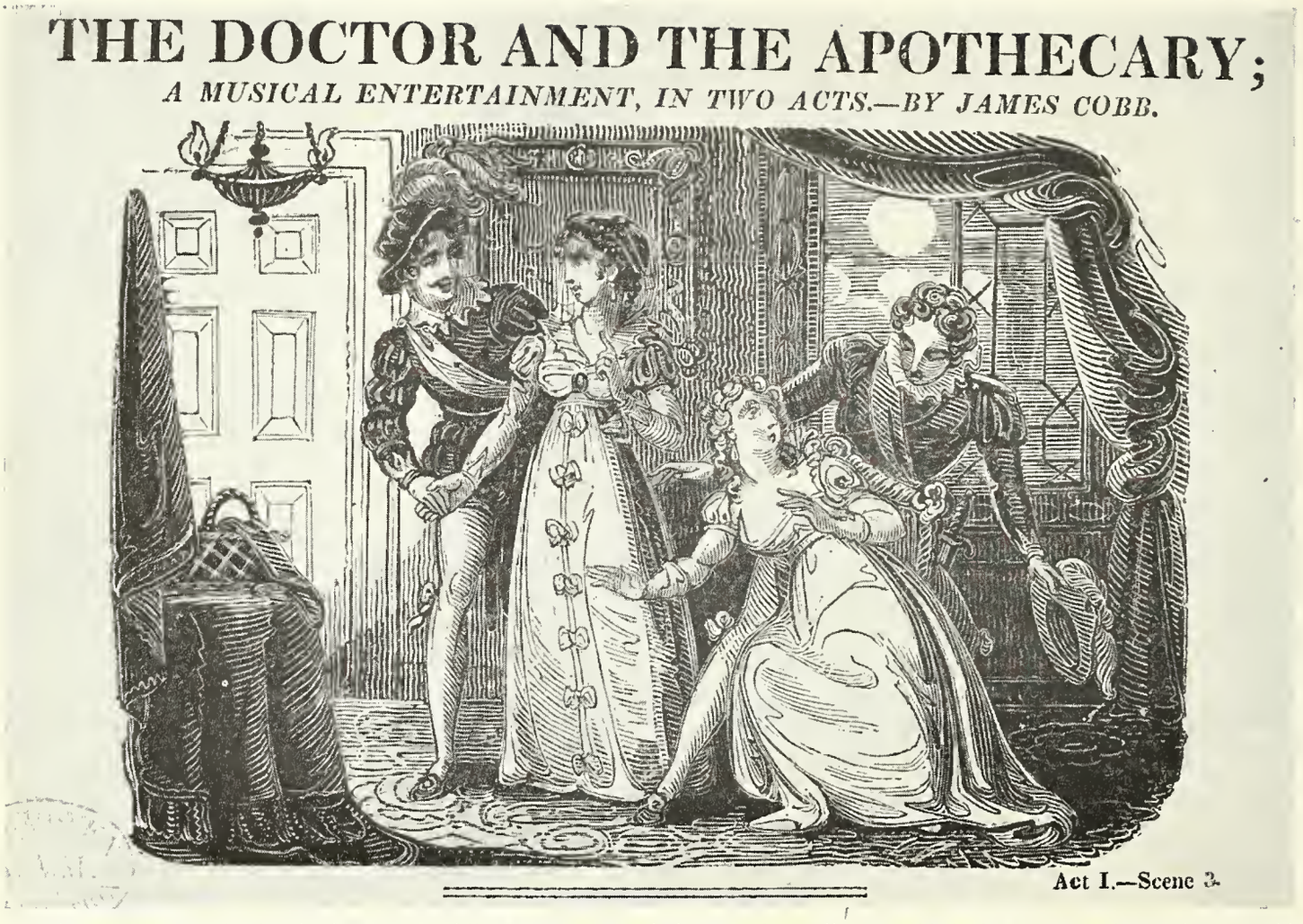
The DOCTOR and the APOTHECARY.

With entirely New Scenes, Dresses, and Decorations.

The Music Composed by Ditters and Storace.

The Principal Characters by
Mr. PARSONS; Mr. KELLY;
Mr. BANNISTER, Jun. Mr. SUETT;
Mr. SEDGWICK; Mr. BURTON;
And Mr. DODD.
Miss ROMANZINI; And Mrs. CROUCH.

On Monday, the Comedy of the Constant Couple. Sir Harry Wildair, Mrs. Jordan; Alderman Smuggler, Mr. Parsons; Angelica, Mrs. Kemble; and Lady Lurewell, Mrs. Ward. And on Tuesday, the Tragedy of Isabella; Isabella Mrs. Siddons.



Wood engraving at the head of the text of "The Doctor and the Apothecary", as published in its translation by J. Cobb

to the work of Goldoni. In this *Singspiel* (German for light opera, literally song-play), the shop *privilegium*† becomes the centre of a comic struggle between an apothecary Enoch, his daughter, the lawyer Reiger, his neice and Doctor Vincent. A second *Singspiel, Die Apotheke* (1778), based on Engel's libretto, was composed by Ignaz Umlauff.

English from Top to Toe

A decade later the Theatre Royal, Drury Lane, London, set the stage for a pharmaceutical "musical entertainment: "The Doctor and the Apothecary." The libretto is a translation by J. Cobb of the text of the opera *Doktor und Apotheker* (1786), written by G. Stephanie. The music is by Karl Ditters von Dittersdorf, one of the most successful composers of *Singspiele*. The success of the London production was helped by additional music by Stephen Storace. *The Times* (October 27, 1788), in patriotic vein, wrote of the music that it is "by Ditters and Storace—that is partly German, and partly English—for Storace, one of the most promising composers we know, has the honour to be 'English, Sirs, from top to toe,'—his airs, which Ditters would be proud to own, promise to be extremely popular." The papers were appreciative of the opera, even if some considered the subject matter too farcical. The scenery excited comment: the effect of a setting sun on the bottles of the apothecary's shop was "*nouvelle* and beautiful." The action takes place in Spain, and the old arch enemies, the apothecary Thomaso, and Dr. Bilioso only become friends as the result of the elopement of Thomaso's daughter, Anna, with Bilioso's son Carlos. A climax to the apothecary *versus* doctor quarrels comes when Thomaso treats Bilios's only patient with his famous medicines. On hearing of it, Bilioso's remarks are candid:

"O curse his quack medicine. . . . I hate all violent remedies. . . . They make an end of a business so soon; . . . they either kill or cure; and then, either way, one loses the patient."[6]

At the time of the first production the ridicule of quack medicines was pointed, such remedies being in great abundance. London was replete with Dr. Hinde's powder, Dr. Sheer's Opodeldoc and Mrs. Norton's Drops, to name but a few. The *St. James' Chronicle* (October 25-28, 1788) was nevertheless respectful to the apothecaries in writing that Thomaso "the Apothecary has a Nostrum and should be ranked as Empirick."

One certainly wonders if Figaro, from Rossini's *Il Barbiere di Siviglia* (1816), is nearer the status of empiric. On his own admission he is "both barber, *perruquier*, the surgeon, and botanist, and leech, I dose his horses, factotum of his [Dr. Bartolo's] household."[7] An acknowledged quack is to be found in Donizetti's *L'elisir d'amore* (1832). The selling by quack Dulcamara of an elixir (a bottle of wine) to the peasant, Nemorina, so as to make him irresistible in the eyes of Adina, sets off a chain of amusing events.

That a proprietary preparation could bring fame and fortune is again suggested in another of Donizetti's operas, *Il campanello* (1836). The opera was composed within one week to save an impressario from bankruptcy. Donizetti also wrote the libretto, basing it on a French vaudeville, *La Sonnette de Nuit* (1815), by Brunswick, Train and Lhéric. The fame brought to the central figure, pharmacist Don Annibale Pistacchio, by his nostrum is evident more than once. An instance is on his wedding night, when he answers his mother-in-law's sadness at losing a daughter:

"A stranger! Who doesn't know Annibale Pistacchio, Chemist of Foria, inventor of the famous pills against asthma, coughs and seasickness."[8]

† *privilegium*, i.e the granting of special privileges on the basis of particular duties carefully stipulated in a signed and sealed document, carrying full legal power.[5] In Germany to around the 1800's the opening and selling of pharmacies was rigidly determined by *privilegium*.

The plot concerns the rejected lover, Enrico, and his revenge on Don Annibale. It is the local custom that the chemists must answer all night calls. Enrico enters three times during the night, in various disguises, and prevents Don Annibale from entering his wedding chamber. An enjoyable part of the opera is the grand Italian singing of the ingredients of a prescription, from cascarilla to tobacco of Maccuba—a lesson in polypharmacy.

The Times' reviewer (December 1, 1837) enjoyed the first performance in England (at the Lyceum),

"as a pleasant trifle which is the extent of its pretension, there are few better than this in the Italian drama, and it can hardly fail to be popular with audiences, in whom a hearty laugh is seldom excited. There is a remarkably pretty overture to this piece, which was encored. The house was full, and the company as aristocratic as ever."

Fairy Opera with Moral

In contrast to the "love-sick pharmacist" is the apothecary in *Crispino e la comare* (The Cobbler and the Fairy) 1850. The music is by the brothers L. and F. Ricci and the libretto by E. M. Piave, based on a comedy by S.

☞ THE LAST NIGHT OF THE SEASON

Theatre Royal, Drury Lane.

NEW OPERA!—NEVER ACTED HERE!

THE PERFORMANCES THIS EVENING WILL BE BY

SPECIAL DESIRE

OF THEIR ROYAL HIGHNESSES

THE DUKE AND DUCHESS OF CAMBRIDGE.

For the Benefit of Mr. RUSSELL,

(STAGE-MANAGER) being his Second these Seventeen Years.

This Evening, MONDAY, June 24th, 1839,

Her Majesty's Servants will perform, under the Title of The

Love Spell.

OR,

THE MOUNTEBANK OF RAVENNA!

THAT CELEBRATED OPERA, "L'ELISIR D'AMORE!"

Universally allowed to be the most superior production of that highly esteemed Composer **Donizetti** which, on its production at the Opera, was performed upwards of a Hundred Nights.

Written, Adapted and Arranged by T. H. REYNOLDSON, and Represented for this One Night by permission of G. H. DAVIDGE, Esq.

The Opera will be produced with appropriate Scenery, Dresses, and Decorations.

☞ The Principal Characters will be thus supported:—

Nemorino, - - - Mr. TEMPLETON,

(His First and only Appearance at this Theatre this Season.)

Dulcamara, - Mr. M. W. BALFE,

Sergeant Belcore, Mr. T. H. REYNOLDSON,

Adina, - - Miss ROMER,

Gianetta, - - - Miss COLLETT,

Which celebrated Professors have lately sustained their respective Characters with the most enthusiastic applause, and kindly render their services on this occasion.

Baldo, Mr. FENTON, Gartano, Mr. HATTON, First Farmer, Mr. HOWELL,
Second & Third Farmers, Mr. HEALY, & Mr. HEATH, Florella, Miss SOMERVILLE, *Villagers, &c.*

Conducted by Mr. STANSBURY,

And supported throughout by the powerful Musical Strength of this Establishment

The Band will be Led by Mr. ELIASON,

who, in the course of the Evening, will perform A SOLO ON THE VIOLIN.

☞ *This Opera contains more than Twenty highly esteemed Songs, Duets, Trios, Quartettes, Choruses &c.*

After which the popular Farce of The

Prospectus of a benefit performance of the "Love Spell, or, The Mountebank of Ravenna" on June 24, 122 years ago. As "l'Elisir d'Amore" the opera had been composed by Donizetti in 1832.

Fabbrichesi. The work is a pleasing fairy opera with the moral to beware of ingratitude and vainglory. The principal character, Crispino, a cobbler facing hard times, is changed by the fairy into a physician. Success in that profession changes his character into a selfish one. Much fun is railed at medicine and pharmacy and Mirabolono, the apothecary, has the rôle of a clown. The opera has a delightful chorus of apothecaries' apprentices singing and pounding with pestles and mortars. Loosely translated it reads,

> "Grind, grind, pestle, pestle,
> The Theriaca which we prepare.
> Good for the ills that fall to man,
> Thanks to this vanishing cure."[9]

Thus the pharmacist can be a suitable figure for satire or farce, when he is in love or otherwise. A few other

NO CHARGE for this PROGRAMME.

SHAFTESBURY THEATRE.

Sole Proprietor. - Mr. JOHN LANCASTER.

Signor LAGO'S

ROYAL ITALIAN OPERA.

MONDAY, WEDNESDAY, and FRIDAY,

October 19th, 21st, and 23rd, 1891

At 9.40 MASCAGNI'S New Opera,

CAVALLERIA RUSTICANA.

Santuzza ...	...	Signorina ADELAIDE MUSIANI
Lola ...	...	Madlle. MARIE BREMA
Lucia ...	...	Miss GRACE DAMIAN
Alfio ...	...	Signor BROMBARA
Turiddu ...	...	AND Signor FRANCESCO VIGNAS

Preceded at 8, by RICCI'S Comic Opera,

CRISPINO E LA COMARE.

Concluding with the famous Trio, "Di Pandolfetti medico."

Annetta ...	...	Madame LAURA ZAGURY
La Comare	...	Signorina BIANCOLI
Fabrizio ...	...	Signor BUTI
Mirabolano	...	Signor CARACCIOLO
Contino del Fiore	...	Signor GROSSI
Don Asdrubale	...	Signor MORO
Bortolo ...	...	Signor POLACCO
Crispino ...	...	AND Signor CIAMPI

Conductor, - Signor ARDITI.

The NATIONAL ANTHEM will be played previous to the Commencement of the Opera.

Programme of the performance at the Shaftesbury Theatre, London, in 1891, of the comic opera "Crispino e la Comare", in which an apothecary has the rôle clown.

operas follow the same pattern. Most are little known, especially in this country, though the music is often pleasing. Notable among them is J. Offenbach's *Apothicaire et Perruquier* (1861). Others of interest are Bruno Bettinelli's *La smorfia* (1913), *Die Hochzeit des Jobs* (1943) by Joseph Hass, *Plumes au Vent* (1958) by Claude Pigault and Paul Bletry's *Le Pharmacien du Faubourg Saint-Denis* (1892).

A slightly more serious note is possibly found in *Belfagor* (1923) by Ottorino Respighi. Belfagor, the devil, in questioning the realistic apothecary, Mirocleto, about life on earth elicits the reply: "a word of advice my friend, is to return to hell, you will be much better there."[10] Laurent's *Les Pilules du Diable* (1839) and Milhaud's *Les Malheurs d'Orphée* (1926) also have supernatural aspects and a setting that has associations with the healing arts.

A Sleeping Draught of Laudanum

On a more dramatic and certainly more serious plane is Benjamin Britten's *Peter Grimes* (1945), the words by Montague Slater. The action takes place about 1830 in The Borough, a small fishing town on the English East Coast. The prominent village inhabitants are portrayed. Among them are the rector, the lawyer, Dr. Thorpe and the apothecary, Ned Keene, each playing a part within the rather rigid code of local social life, a code Grimes cannot accept. Britten gives a glimpse of the facile use of opium at the time, showing Ned Keene supplying Mrs. Sedley with a sleeping draught of laudanum.



Mrs. Sedley with the apothecary Ned Keene from "Peter Grimes." [*Photo: Angus McBean*

Drugs and poisons occur more frequently in operatic scenes and another instance concerning opium is in Franco Leoni's *L'Oracle* (1905). The opera aims to depict certain phases of the American-Chinese character. The scene is set in San Francisco and an important and despicable character is Chim-ten, whose evil character is allied with his opium den, emphasising the drug's demoralising effects.

Along with the pharmaceutical practitioner the alchemist has occasionally been the target for amusement. The earliest example is probably the musical entertainment *The Alchemist* (1732) by Giorgio Handel, based on Ben Jonson's play. Rocchietta has listed other operas with an alchemist as character.[2]

It is seen that the pharmacist, as a member of the community, is not forgotten in opera. Among the hundreds of minor light operas, it is the operas themselves that are usually forgotten, especially in Britain, where interest in opera has lagged behind the love of literature and music. Will not some enthusiastic British musical pharmacist, some time, emulate the continent by putting on "pharmaceutical opera" productions?

Illustrations are from the Enthoven theatre collection, Victoria and Albert Museum, London, by permission of the curator.

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Haydn's *Der Apotheker* has been recorded by Magic-Tone Records, New York (MLO 1007) in English. And by Cetra Records (PC 55024).

ECHOES OF THE PAST

TREATMENTS FOR THE DROPSY

From *Primitive Physick*, by John Wesley, 1772

305. Or, mix half an Ounce of Amber with a Quart of *Wine Vinegar*. Heat a Brick (only not red hot) and put it into a Tub. Pour them upon it, and hold the Parts swell'd over the Smoke, covering the Tub close, to keep in the Smoke. The Water will come out incredibly, and the Patient be cured: Tried:
306. Or, eat a *Crust of Bread* every Morning fasting: Tried:
307. Or, take as much as lies on a Six-pence of powder'd *Laurel-Leaves*, every second or third Day. It works both Ways: Tried.
308. Or, mix a Pound of the coarsest *Sugar* with a Pint of Juice of *Pellitory of the Wall* bruised in a Marble Mortar. Boil it as long as any Scum rises. When cool, bottle and cork it. If very bad, take three Spoonfuls at Night, and two in the Morning.—It seldom fails: Tried.
309. Or, take Morning and Afternoon half a Pint of strong Tea of *Lavender Cotton*: Eating a Slice of Bread and Butter, strew'd thick with *Garlick*:
310. Or, boil two Handfuls of *Elder-Roots* in a Quart of Water. Strain it and drink a large Glass thrice a Day for thirty Days. It frequently cures in that time.
311. Or, make Tea of Roots of *Dwarf-Elder*. It works by Urine. Every twelve or fourteen minutes (that is, after every Discharge) drink a Tea-cup full.—I have known a Dropsy cured by this in twelve Hours Time.
312. *Tar-Water* drank twice a Day has cured many: So has an Infusion of *Juniper Berries* roasted, and made into a liquor like Coffee:
313. Or, take a Spoonful of the Juice of Artichoke-Leaves, Morning and Evening:
314. Or, three Spoonfuls of the Juice of Leeks and Elder-Leaves: Tried.
315. Or, half a Pint of Decoction of Butchers Broom (intermixing Purges twice or thrice a Week). The proper Purge is ten Grains of *Jalap* with six of powder'd *Ginger*. It may be encreas'd or lessen'd according to the Strength of the Patient:
316. Or, of the Decoction of the Tops of *Oak-Boughs*. This cured an inveterate Dropsy in fifteen Days:
317. Or, take a Spoonful of whole *Mustard-Seed*, Night and Morning, and drink on it half a Pint of Decoction of green *Broom Tops*. Works both by Stool and Urine:
318. Or, use *Sal Prunellæ* in your common Drink, thirty Days:
319. Or, take *Sena, Cream of Tartar* and *Jalap*, half an Ounce each. Mix them and take a Dram every Morning in Broth. It usually cures in twenty Days. This is nearly the same, with Dr. *Ward's* Powder, I suppose he took it from hence. He says, it seldom fails, either in the watry or windy *Dropsy*.
320. Or, drink *Sea-Water*, Morning and Evening:
321. Or, abstain from all Drink for thirty Days. To ease your Thirst hold often on your Tongue, a thin small Slice of toasted Bread dipt in Brandy; or, wash the Mouth with Juice of Lemons: Tried.
322. Or, be *Electrified;* This cures Dropsies supposed incurable.
323. But how amazingly little is yet known, even of the human Body! Have not dropsical Persons been continually advised to abstain from Drink as much as possible? But how can we reconcile this with the following undeniable Facts, publish'd in the late *Medical Transactions*?

"*Jane Roberts*, aged Twenty, was at length constrain'd to take her Bed by a confirmed *Ascites* and *Anasarca*. In this desperate Case, she drank as much as she would, first of *small Beer*, and when that failed of *thin Milk*. After a while her Skin cracked in many Places; and she continued drinking and leaking till she was quite well.

A middle-aged Man in the West of *England*, drank every Day five or six Quarts of Cyder; and without any other Medicine, was totally cured in a few Weeks Time of a Dropsy long supposed to be incurable.

A Farmer aged Seventy, in a confirm'd Ascites, was given over for Death. Being desperate, he drank three Quarts of *Cold Water* every four and twenty Hours. His whole Food mean Time was Sea-Biscuit, sometimes with a little Butter. For sixteen Days he seemed worse. Then he discharged for near a Week a vast Quantity of Water, and was soon free from his Disease, which never returned."

† A *DROPSY* is a preternatural Collection of Water, in the Head, Breast, Belly, or all over the Body. It is attended with a continual Thirst. The Part swelled pits, if you press it with your Fingers. The Urine is pale and little.

FRIENDS in Pharmacy

The influence of some famous Quakers on the development of pharmacy and the pharmaceutical industry in Britain

MARGARET STILES

SOME of the most famous pharmaceutical houses in England were founded in the eighteenth and nineteenth centuries by the Quakers: members of the Society of Friends. Since the Quakers were a nonconformist sect at a period of history when nonconformity meant persecution and severe penalties, and since they were opposed to any form of self-advertisement or self-seeking, both of which might seem to be handicaps to the building-up of commercial enterprises, it is a paradox that their success should have derived from the nature of their religious beliefs and practices. Yet so it was.

The early Quakers, followers of the early seventeenth century reformer, George Fox, were quiet, scholarly philanthropists, who conducted their business activities, like their private lives, according to the highest principles of their religion. The society had its roots among those many religious movements that resulted from the Reformation. Known first as the " Children of Light," Fox's followers later called themselves " Friends " or " Friends in Truth," eventually taking on their modern description: " The Religious Society of Friends."

The term " Quaker " was first used derisively, because it was said that they trembled or quaked with emotion at their meetings. Later it came into such general use that it ceased to carry any stigma. Some of the religious beliefs of the Quakers and attitudes need to be set forth in order to gain an understanding of the remarkable business success that came to them in the pharmaceutical and other commercial and industrial spheres, to which—as to science—they have contributed many far-reaching discoveries and developments.

Though time has wrought some changes in detail of belief, the general characteristics of the Quakers continue. Pacifist from the start, they have rallied to the relief of refugees from wars. Humanitarians, they have worked freely for the poor and prisoners in Britain, for slaves abroad, and for famine victims everywhere. In the freeing of the slaves in British colonies their efforts were a major contribution, and they founded some of the first schools for educating the children of the poor.

Quaker Characteristics

The Quakers were, in their beliefs, strongly opposed to the orthodox church with its ministers and steeplehouses. They were quietists, waiting in silence at their meetings for divine guidance. They had no set prayers, and meetings sometimes took place in complete silence. They had no time for " empty ceremonies," believing in a return to the Bible and strict obedience to the commandments. They had no ministers, believing that the ministry should not be a means of livelihood, and that preaching should not be confined to those with theological training. Offices were strictly functional, and no votes or majority decisions were taken, members waiting in silence for agreement, and the clerk then reporting " the sense of the meeting." They believed in absolute simplicity and sobriety, were opposed to frivolity, and regarded music and art as unsuitable indulgence and waste of time. They adopted the sober dress that became the badge of their religion, though the flowing hair, plain broad-brimmed hat, drab collarless coat, waistcoat, knee-breeches, stockings and buckled shoes have passed. The furnishings of their houses were of primitive simplicity, and dancing and the theatre were forbidden. Believing that all men were equal in the sight of God, they refused to doff their hats, even for Royalty, and would suffer imprisonment rather than carry arms, though they readily went on to battlefields or into plague-infested houses to minister to the wounded and sick.

Those principles, rigidly adhered to by the early Quakers, had a profound effect on their business lives. The Quaker religion was a way of life, and business not just a means of making money. Activity was thought of as a benefit to the community, enterprise a virtue, and idleness a sin. It was said of them that " they did business like saints, and saints who were most efficient business men." They were opposed to acquisitiveness, but believed that money, honestly acquired and spent in the right way, was a valuable and useful commodity. Their principles exhorted them to " guard against a spirit of speculation," so they never became rich by sudden gains, but were earnest, cautious and hardworking, patient, frugal and thrifty. Brought up in the fear of eternal punishment, they had an almost equal fear of debt. Bankruptcy usually meant expulsion from the Society. For going to law against another Friend they could be disowned by the Society, and differences had to be settled by arbitration. As employers they were enlightened, doing all they could for the good of their employees.



Frederick Smith, chemist and druggist, Haymarket, as portrayed in a painting, "The Quiet Hour", in the library of the Society of Friends.

The Quakers became mostly traders and manufacturers because they were barred from public offices and politics by the Test Act of 1673, which laid down that all public officials must receive the Sacrament according to the usage of the established church. For the same reason they were barred from Universities. They could not become landlords because they objected to tithes. The manufacture of arms, privateering and dealing in slaves were against their principles. So it is that we find them in banking, brewing, the food industry and pharmaceutical manufacture.



William Cookworthy, Stafford Allen and J. G. Bevan

One at least of the great pharmaceutical houses founded by the Quakers is still conducted by descendants who continue to be members of the Society of Friends: the business of Stafford Allen & Sons, Ltd. Stafford Allen, the founder, was born in 1806, a nephew of William Allen of Plough Court fame. At that time it was the custom of trade that the drug miller should return 108 lb. of powder for every cwt. of raw material ground. Where actual milling losses were greater, as sometimes happened, it was the accepted practice to make up the deficiency with adulterants. William Allen, with his Quaker principles of honesty and fair dealing, deplored the practice, and in 1833 persuaded his Quaker nephew, Stafford, to go into partnership with Charles May, a druggist and herb grower at Ampthill, Beds, to set up drug mills in Cowper Street, London, at which adulteration would not be practised. The business, which included also general pharmacy and oil distilling, was conducted by Stafford Allen. Charles May carried on the herb growing and oil-distilling business at Ampthill, where he was later joined by Stafford's brother George who, in 1843, took over the Ampthill business entirely. In 1893, on the death of George Allen, the Ampthill business was in turn taken over by the firm of Stafford Allen & Sons, and five years later the drug plant and farm equipment were transferred to Long Melford, Suffolk, where they are still in operation. In the meantime the Cowper Street premises were enlarged and others acquired at Ardleigh Green, Essex. Later a central factory was acquired and an office block built at Wharf Road, City Road, London, N.1.

Plough Court and its Early Days

Like their Quaker contemporaries, Stafford Allen and his wife Rachel were ardent workers in the anti-slavery campaign. Soon after the end of the American Civil War Stafford visited America, and was, in fact, in North Carolina when the slaves were freed in 1869. In 1886, at the age of eighty, he was elected president of the British and Foreign Anti-slavery Society, and was one of a deputation sent by the Society of Friends to mark Queen Victoria's Jubilee in 1887.

The pharmaceutical company of whose Quaker foundations most details are generally known is Allen & Hanbury's, Ltd., Bethnal Green, London, E.2, The original Old Plough Court, Lombard Street, London, pharmacy was opened in 1715 by Sylvanus Bevan, grandson of William Bevan, a merchant of Swansea, and the first of the family to join the Society of Friends. Sylvanus was apprenticed to Thomas Mayleigh, a London apothecary, and in 1715 married Elizabeth, daughter of a Quaker clock-maker, Daniel Quare. A copy of their marriage certificate is preserved in the British Museum.

At 2 Plough Court, where Bevan set up in business, he " sold good drugs at fair prices and acquired a good name and great respect for the quality and reliability of all his products." He had a laboratory in which he manufactured many of his own galenicals, and a garden in which he grew medicinal and rare plants. Sylvanus was elected a Fellow of the Royal Society in 1725. Childless by both his first wife, who died, and again by his second, Martha Heathcote, he took as apprentice about 1723 his younger brother Timothy, whom he later admitted to partnership. Sylvanus, in his later years, practised as a doctor. He died in 1765.

Timothy Bevan I was admitted to the Society of Apothecaries in 1731, and during his partnership with Sylvanus began the development of the business in overseas markets. The partners supplied the first shipment of drugs to the newly founded Pennsylvania Hospital in Philadelphia, U.S.A. In 1735 Timothy married Elizabeth Barclay, who lived till 1745, and they had two sons, Timothy II and Sylvanus. In 1753 Timothy I married Hannah Gurney, and in 1776, after the death of Sylvanus I, took his own two sons, Timothy and Sylvanus, into partnership. He survived them in the business, for Sylvanus retired in 1767 to become a partner in Barclay's bank, and his brother died in 1773. Timothy I carried on the business alone until 1775, when he handed it over on his retirement to Joseph Gurney Bevan, the only son of his marriage to Hannah Gurney.

Joseph Gurney Bevan was a man of the strictest Quaker principles, and refused to supply anything but the best quality drugs . . . for good payment. He demanded prompt payment, but had the Quaker horror of going to law, even to recover a debt. As a staunch Quaker, too, he would not use the heathen names of the months, which during his time were always designated numerically in the firm's books. During the Napoleonic Wars Joseph refused to supply drugs to armed vessels, but served assiduously as a special constable. He had strong views against slavery, and would rather wait years for debts owing to him than accept money obtained by selling negro slaves. He retired from Plough Court in 1794, at the early age of forty, and died eighteen years later. In 1792 he had taken into the business William Allen, who on Joseph's retirement ran the business for seven years in partnership with a non-Quaker. He was then joined by another Friend, Luke



William Allen

Howard, who in 1807 took over the firm's laboratories at Plaistow, leaving Allen in charge at Plough Court.

William Allen became perhaps the most eminent of the Quaker pharmacists. Born in 1770 to staunch Quakers who were silk weavers in Spitalfields, at the age of fifteen he was apprenticed to the family trade, and remained there for three years. He always disliked it, however, preferring scientific subjects. He constructed for himself a telescope while still only fourteen years of age, and his interest in astronomy remained with him all his life. A parallel interest in chemistry aroused the attention of Joseph Gurney Bevan, and in 1792 the young scientist entered Plough Court. Allen has been described as sensitive, introspective and lonely. A good business man, he was also a philanthropist, and what money he made was mostly given away, so that he died comparatively poor. " The main object," he wrote " is the good of others; for this I have in great measure given up my own gratification, for if my time were devoted to philosophical pursuits and experiments, to which I am so naturally prone, the path to honour and distinction stands fair before me."

Lectures in Natural Philosophy

Three years after entering Plough Court, Allen was elected a member of the Physical Society at Guy's hospital. From 1802 to 1826 he lectured in chemistry at Guy's and in 1803 began to study botany, gaining election as a Fellow of the Linnean Society in 1805. In 1803–04, as well as in later years, he lectured in natural philosophy at the Royal Institution, to whose board of managers he was eventually elected. At the end of 1803 Allen became one of the presidents of the Physical Society, and in 1807 was elected a Fellow of the Royal Society, of whose council he became a member in 1814. Allen's links with pharmacy widened in other ways. In 1796 he had married Mary Hamilton, who died less than a year later, leaving an infant daughter. Nine years later he married Charlotte Hanbury who died at Geneva in 1816, at a time she and William were on a missionary visit to Europe. A year later Allen adopted twelve-year-old Christine Majolier, daughter of some friends, and Christine later married Robert Alsop, a Quaker chemist. In 1822 Allen's daughter Mary married Cornelius Hanbury.

Elected a member of the committee of the Society for the Abolition of the Slave Trade in 1805, Allen became, after a Bill for the abolition of that trade was passed, a leading member of a society formed to promote the civilisation of Africa. For many years he supported the work of Joseph Lancaster, who had been helped by the Society of Friends to establish and maintain a school for 1,000 children, and he became treasurer of the Royal Lancastrian Institution (eventually the British and Foreign School Society). In 1825 he founded a system of cottage farms at Lindfield, Sussex, and set up there a small boarding school for boys, to whom he gave lectures in chemistry, philosophy and astronomy. He also took part in a scheme for improved conditions for factory workers at Lanark.

Allen was friendly with British and foreign royalty, and especially with Tsar Alexander I of Russia, as a result of whose friendship he was offered the exclusive purveyorship of medicines to the Russian army, an offer his Quaker pacifist principles caused him to refuse. He led the deputation from the Pharmaceutical Society that greeted William IV* on his accession, and he twice led Quaker deputations to Queen Victoria—in 1837 to present an address, and in 1840 to congratulate her upon her marriage.

Allen worked as indefatigably in the interests of his own profession. In 1813 he was one of those chemists who united to oppose the Apothecaries Bill and were successful, first in getting it withdrawn, and secondly in having inserted in the 1815 Apothecaries Bill, which became law, a clause to protect chemists and druggists. Allen was present at the meeting in 1841 at which the Society of Chemists and Druggists was formed, and when, two months later the Pharmaceutical Society was founded he was made president. At that time his health was already failing, and two years later he died.

As William Allen became more and more concerned with philanthropic work and travelling, he gradually relinquished the control of the business to John Thomas Barry, a Quaker who had been at Plough Court since 1804, and a partner from 1818. Barry was a distinguished chemist who had also the Quaker enthusiasm for humanitarian and philanthropic work. He was especially known for his work for the abolition of the death penalty for minor offences. Barry retired from Plough Court in 1856, and died in 1894.

In 1824 Allen's two nephews, Daniel Bell Hanbury and Cornelius Hanbury, had been taken into partnership. Daniel Bell Hanbury was a founder member of the Pharmaceutical Society, and gave much time to its work, but he also accompanied William Allen on more than one Quaker missionary journey abroad and was in close touch with most of the Quaker philanthropic work of his time. He retired from Plough Court in 1868. Cornelius Hanbury in 1822 married William Allen's daughter Mary, who died only a year later. He retired from Plough Court in 1858.

Daniel Hanbury, the son of Daniel Bell Hanbury, who entered Plough Court in 1856, was a distinguished chemist and botanist, a Fellow of the Linnean, Chemical, and Royal Societies. He was one of the Pharmaceutical Society's examiners, 1860–72, and founded the Hanbury medal for research in chemistry and pharmacy. He typified the Quaker way of life in his dislike of ostentation and luxury. He disliked both tobacco and alcohol.



Cornelius Hanbury I and Cornelius Hanbury II

Daniel's cousin Cornelius II, son of Capel Hanbury and Charlotte Bell, went into partnership with Daniel in 1856. He adopted the Quaker style of dress for some years, but " failed to attach much importance to it " and from his time onward the Quaker influence in the company appears to have declined.

Howards of Ilford, a family business that has been handed down in unbroken succession for five generations, was also founded on strong Quaker principles. In the foreword to the company's centenary book, published in 1947, appears the statement " We are proud of our forebears, and it is our earnest desire to emulate their solid Quaker virtues of honesty and goodwill." Luke Howard, the founder, who came from a long line of Quaker ancestors, was founder member of the Bible Society. He served his apprenticeship to Ollive Sims, a Quaker chemist in Stockport, whose business subsequently developed into the firm of J. C. Arnfield & Sons, later to be acquired by James Woolley, Sons & Co., Ltd.

Luke set up in business as a retail chemist at 29 Fleet Street, London, but in 1797 was taken into partnership by William Allen at Plough Court. The partnership was later dissolved, and Luke took charge of the manufacturing laboratories at Plaistow, Allen remaining at Plough Court. Luke had many other interests. He had an observatory at Plaistow, and for his work on meteorology was elected a Fellow of the Royal Society. Howard supported Allen in much of his work for the abolition of the slave trade, going with Allen to St. James' Palace to present addresses from the Society of Friends to the Emperor of Russia and to the Prussian ambassador.

(*To be continued*)

* Frederick William IV of Prussia.

Processing Ilfacolor

IN the past few years the amount of colour film sold in Britain has increased considerably — in some circles figures are quoted showing an increase by a factor of four in the past six years. Chemist dealers have undoubtedly played their part in contributing to the popularity of colour, and perhaps have contributed even more than their share with the wider range of colour negative films that have become available in the last two to three years.

Colour negative films are the counterpart in colour of the popular medium speed black and white films such as Selochrome, and its counterparts by other manufacturers. They have excellent exposure latitude, and the speed has been set at a level that gives correct exposure in bright sun for simple cameras with fixed aperture and one or two shutter speeds.

In addition, colour negative films relieve the beginner in colour photography of the need to worry about correct colour balance of the lighting. The two most popular types of lighting for the amateur snapshotter are, of course, daylight and flash and, owing to the possibility of correcting colour balance at the printing stage with colour negative film, the user can simply fire away secure in the knowledge that the processing laboratory will be able to cope. Current sales of colour negative film run into many millions of spools throughout the world, and the processing laboratories that have been set up to handle them do a job of almost unrivalled complexity with commendable speed.

Research and Know-how

The youngest of the colour negative films to arrive on the British market is Ilfacolor, the combined production of I.C.I. research and Ilford experience in the manufacture of photographic materials. In order to handle the steadily increasing quantity of Ilfacolor film since the material was introduced in the spring of 1960, Ilford, Ltd., have installed a new processing laboratory at Basildon, Essex. In it all Ilford colour materials are now processed—Ilfachrome colour reversal film; Ilfachrome prints from reversal transparencies; and Ilfachrome colour duplicates. To see how such a laboratory operation is organised, it is appropriate to follow the train of events that is set in motion when a customer hands a roll of Ilfacolor film to the dealer for processing.

Many people, even knowledgeable people, still have the impression that individual rolls of colour film are processed in separate tanks of solution, in just the same way that amateur and professional photographers deal with their black-and-white films. Anyone with that preconceived idea would be staggered at the size and complexity of a modern colour film processing laboratory, which has to be designed to get the best from hundreds of thousands of individual films, every one carrying the cherished colour pictures of an amateur photographer.

At the Counter

The first stage in processing an Ilfacolor film, and an important one, occurs on the dealer's counter when he writes out the order. The Ilford colour order form resembles a black-and-white processing order form fairly closely but, as may have been noticed, it is printed on translucent paper. The copy of the form that is sent off with the film stays with it all through the laboratory, and is the means by which the film gets back to the sender (the dealer), and eventually to the right customer. The form is printed on translucent paper so that it can be used with a semi-mechanised pricing system which employs the Ilford Azoflex office copying method.

When the films arrive at the laboratory they are removed from the backing paper in total darkness and clipped on to racks, five at a time, with the order clipped at the top to the film with which it belongs. Each rack of films then goes on to the feed side of an automatic processing machine where the films pass through half a dozen different solutions and intermediate washing steps to a pre-timed sequence. The racks are moved from solution to solution mechanically and after finally passing through a drying tunnel they arrive at the take-off end of the machine. The temperatures of the processing solutions and the wash water are accurately controlled, as are the times which the films spend in each bath.

At the take-off end of the machine the racks of film are removed by an operator, who hangs them over an illuminator, carefully checks every negative, and makes two small notches in the margin of any which, for one reason or another, will not make good prints.

The films are then passed in batches of ten to the printing department. Here girls operate printers which make standard size enlargements from the negatives. The printers automatically assess the colour balance and density of the negatives and make the exposure to produce a print. All the operator has to do is locate the negatives in turn in the correct position under the negative mask and press a foot switch which starts the exposure. The printer does the rest automatically and winds on the paper in between exposures. The exposed colour paper is wound up into a roll by the printing machine, and when a full roll, containing perhaps more than a thousand prints, has been exposed it is taken to the paper processing machine.

The colour paper is processed as a continuous strip and is taken off the roll at the feed end of the machine in a subdued orange light. The paper passes through the tanks containing the processing solutions in turn, travelling over rollers at the top and bottom of the tanks in a gigantic horizontal zigzag path. At the end of the machine the paper is dried and emerges into white light again.

The rolls of colour prints, as they now are, are taken from the machine and, still in the roll, are checked by skilled examiners who look at every print and reject any which are not up to standard. These prints are remade and married up with the rest of the order by the girls, who cut the prints from the roll and insert them into the wallets with their negatives.

All that then remains is for the price of the work, which depends on the number of prints in the order, to be imprinted on the original order form and for an Azoflex copy of that order to be made. The Azoflex copy accompanies the wallet with the negatives and prints when it is returned to the dealer, and the original order is then passed to the accounts department and used to produce the invoice on which all the individual orders received from the dealer in the month are listed.

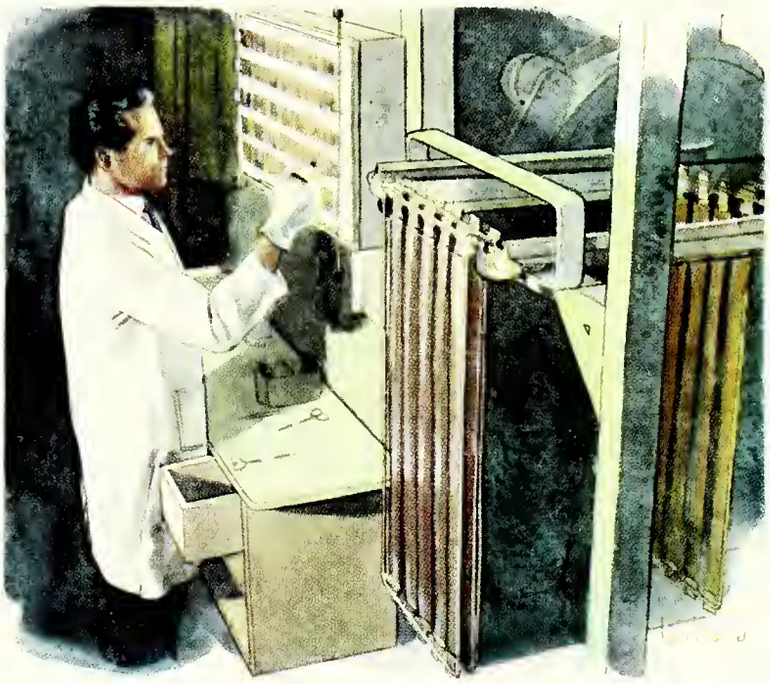
System plus Science

That, in a nutshell, is the way that it is done. Making sure that the right film gets back to the right dealer and the right customer is a matter of systematic handling. Making sure that every film is processed rapidly and as perfectly as possible is a matter of scientific control at every stage with any possibilities of human error removed by proper design of automatic equipment. Without electronic, chemical and photographic controls at every stage it would be impossible to deal with the thousands of films that pass through the laboratory every day at busy times of the year.

The future of colour photography undoubtedly lies with the negative-positive process, since the average user of the snaphot camera is used to looking at prints and appreciates their convenience. It has been estimated that there are more than 10 million camera owners in the United Kingdom, and about 80 per cent. of those people own a simple camera. It is easy to see, if those figures are correct, that there re-

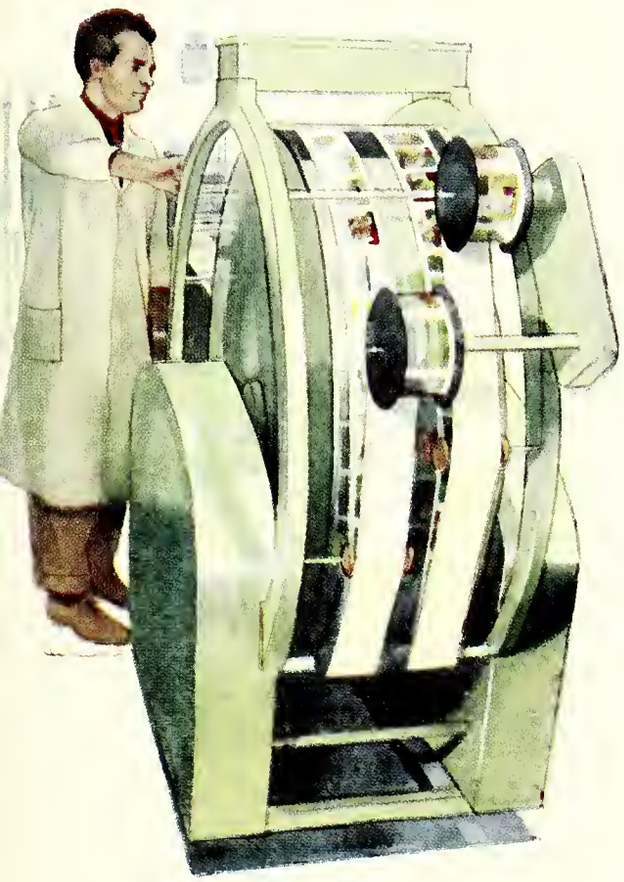
mains plenty of room for an expansion of the colour market.

Given rapid and high-quality processing of his colour film, the amateur photographer will be encouraged in the best possible way to use more and more colour and to display his colour pictures proudly to his friends. That can do more to break down the belief that colour photography is difficult than any amount of technical instruction and advertising on the part of the manufacturer. Ilford, Ltd., Basildon, colour processing laboratory is playing a major part in popularising colour photography for the man in the street. Ilfacolor film, a product of British research and British manufacturing know-how, undoubtedly has a bright future.



1. Checking negatives as they come from the processing machine and before sending them to the printing department.

STAGES IN THE PROCESSING OF ILFACOLOR PRINTS

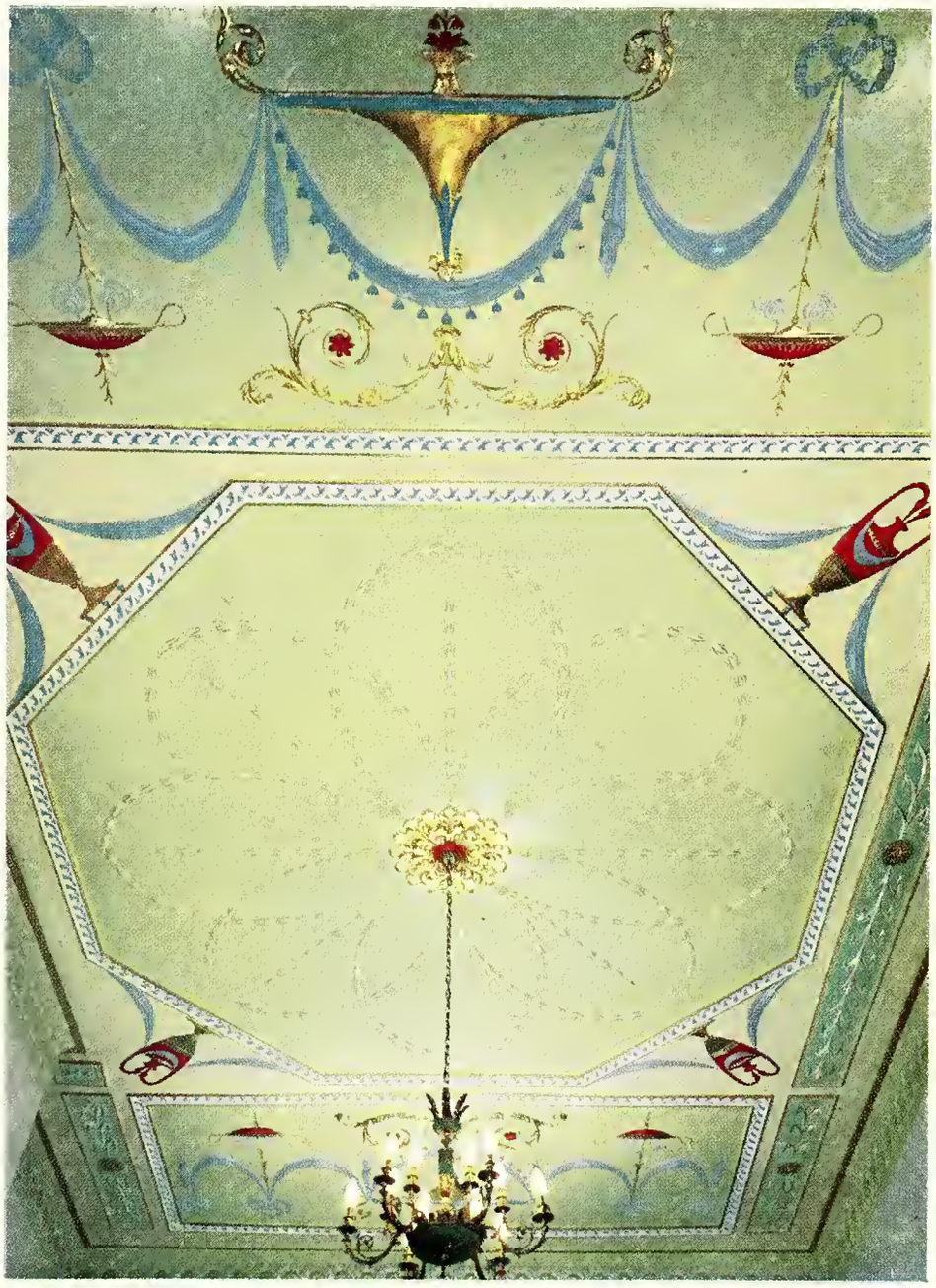


2. Drying colour prints on heated rotary drum.



3. Carrying out a visual check of colour prints before they are dispatched to the customer.

THE colour illustrations are from drawings by Michael Leonard and are reproduced by courtesy of Sir Richard Keane, Bt., editor of *I.C.I. Magazine*, where they first appeared.



Decorated CEILINGS at the Pharmaceutical Society's House

THE exterior of the premises at No. 17 Bloomsbury Square, the headquarters of the Pharmaceutical Society of Great Britain since it was established in 1841, is accepted among architects, and by architectural critics such as Sir John Summerson, as one of the earliest examples of the stucco work for which Nash, the creator of Regent Street, later became famous. He applied the stucco to two houses already in existence in the Square, and for a time lived in one of them himself.



About the interior of the building less is known with any certainty. The artistic merit of two of the ceilings has long been recognised, and when the Pharmaceutical Society's architects, Messrs. Devereux and Davies, F/F.R.I.B.A., made a survey of the premises in preparation for the alterations now being carried out in the Society's headquarters, they recommended that the ceilings should be restored in colours characteristic of the period in which they are assumed to have been constructed. It was a period in which the brothers Adam were dominant in interior decoration, though it is not thought, by experts who have examined the ceilings, that they were designed by Robert Adam himself. One possibility is that they were designed by Nash.

In the restoration, however, Adam colour schemes have been followed, possibly because more is known of the principles of design and colouring which Adam enunciated. In an American work "Color Schemes of Adam Ceilings" (Geering and Geering), it is stated that "in Adam ceilings usually positive colors are used and color played an integral part in the design," and also that "from a cursory examination of the volumes [of Adam's own sketches preserved at the Sir John Soane museum, Lincoln's Inn Fields] it appears not unlikely that Adam may have studied the color scheme of a room in the ceiling design as offering a more uninterrupted area than would the walls."

In the restoration the full splendour of the ceiling colours has been brought out by keeping the walls, floor covering and furnishings in quieter tones.



1

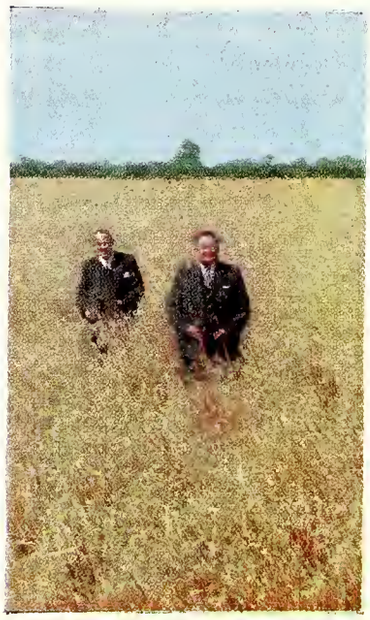
WILD OATS CHEMICALLY DESTROYED IN CORNFIELDS? THAT MUST SURELY BE

a major breakthrough in herbicides

HERALDED as an effective chemical control of the wild oat, Avadex (2.3 dichloroallyl-di-isopropylthiolcarbamate), a herbicidal preparation, developed in the United States by the agricultural chemicals division of Monsanto Chemical Co., makes its appearance in Britain after "the worst season in memory" for both spring and winter varieties (*Avena fatua* and *Avena ludoviciana* respectively) of the weed. Avadex is a pre-emergent herbicide that is applied to the soil as a low-pressure spray at the stage when the soil is half-way to a tilth. From trials in Britain in some of the worst areas of infestation 90-98 per cent. successes in eradicating the wild oat have been claimed.

Tough Problem

The problem was one it was obviously difficult to solve. In appearance as in habit the similarity of the wild to the cultivated cereal is great. The seed of the weed, too, is ideally designed for self-sowing, its inch-long awns attaching themselves readily to sacks or clothes and so becoming widely distributed; and stabbing equally readily into moist soil to gain an anchorage from which to sprout. The seed is credited by farmers with phenomenal powers of latent survival. Certainly the conditions it prefers for germination are those the farmer seeks to provide for his cultivated crop. At present the product is being recommended for use with barley, but further trials are in process for establishing its suitability for crops of wheat, peas, beans and sugar beet. Sole agency for Avadex has been secured by Boots Pure Drug Co., Ltd., Nottingham.



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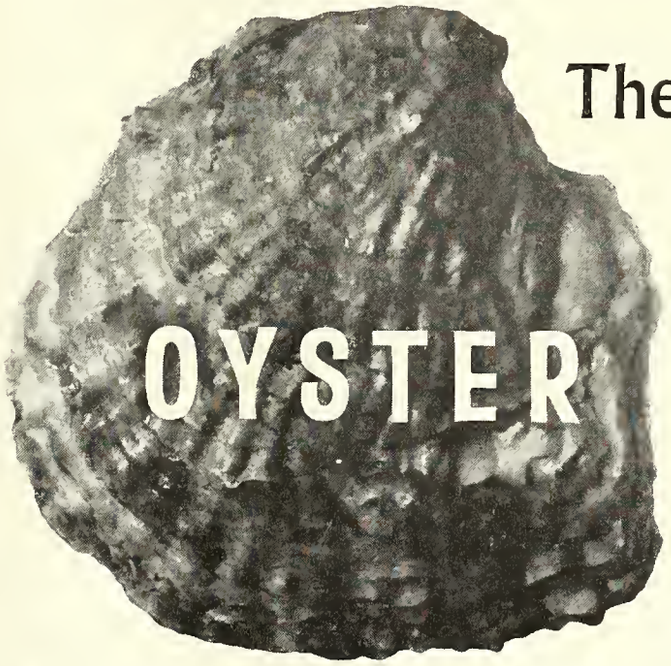
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1. The wild oat. In 1960 it cost some farmers up to £8 per acre.

2. and 3. An infested field contrasted with a virtually weed-free field.

4. So like the real thing—and yet so useless.

SAFEGUARDING A HARVEST OF THE SEA



The Rôle of Chemicals in OYSTER CULTURE

G. DUNCAN WAUGH, B.Sc., AND
DONALD A. HANCOCK, Ph.D.

You'd ha' made an uncommon fine oyster, Sammy, if you'd been born in that station of life. — Tony Weller in Dickens's "Pickwick Papers."

THE oyster grower is truly a farmer of the sea bed and, as a farmer, must try to eradicate, or at least control, the predators and pests of his crop in order to obtain the maximum yield per unit area. Raising a crop of oysters is a fairly lengthy business. The oyster takes at least five years to reach marketable size from the time the free swimming lava settles to the bottom and attaches itself as a tiny oyster or spat. At all stages it is subject to the ravages of predators and pests and to competition from other species.

Little can be done to conserve the larval stages in nature, but once the spat are ready to settle, even though they will then only be 1/100 in. in diameter, the oysterman can take active steps to safeguard and husband them. From then to the final purification of the marketable oyster, chemicals have a rôle to play. In fact, they also have a use in the artificial culture of oyster larvæ, though that is a problem which is still in the experimental stage.

Free swimming larvæ sink to the bottom when they reach settlement size and attach themselves to suitable clean hard surfaces. Part of the system of oyster culture is to facilitate settlement by providing additional clean surfaces in the form of shells or tiles during the summer breeding season. The collecting surfaces need to be put out at the correct time. If the season is a suitable one, spat will settle on them, but such surfaces are equally attractive to other sedentary animals, notably the immigrant New Zealand barnacle, *Elminius modestus*. This intruder first appeared in this country in 1945, and has become a serious pest of east-coast oyster grounds. It has been recorded as settling at a density of 600 per sq. in. per week in midsummer. When that happens there is little room for the settlement of oyster spat, and those which do manage to attach themselves have their growth impeded by the surrounding barnacles competing for the available food. DDT sprayed on the collector surfaces, at the rate of 0·03 mgm. per sq. cm., is highly satisfactory in preventing or substantially reducing a barnacle settlement. This leaves room for an increased set of oysters, and collectors sprayed with DDT not only attract twice as many spat as those which are unsprayed, but the growth rate of spat on them is considerably higher (Plate 2). Unfortunately, DDT is effective only against crustaceans, so that other chemicals need to be used to deal with other competitors.

Two of the major pests were introduced to Britain accidentally from America. They are the American whelk tingle (*Urosalpinx cinerea*) and the American slipper limpet (*Crepidula fornicata*) (Plates 1 and 3). The tingle is a snail that preys on oysters, and particularly on oyster spat. It drills a hole through the shell and sucks out the flesh. The spawn of the tingle snail consists of capsules attached to hard surfaces on the sea bottom, inside which the eggs and embryos develop to hatch as young tingles. Because it has no free swimming larvæ, its distribution has undergone no rapid increase since its introduction, and it is still confined to Essex and Kent. The slipper limpet, however, with its free swimming larva, has spread widely round British coasts. It is a filter feeding mollusc that may carpet the sea bed with chains of individuals which compete with oysters for food and settling space. One important problem to which it is hoped to find an answer is the chemical disinfection of oysters to rid them of *Urosalpinx* and its spawn, which could otherwise easily be spread on oysters transplanted from infected areas. Both tingles and slipper limpets are related to the oyster, and it has so far proved difficult to find a molluscicide that will kill those pests without also harming the oysters.

Oyster biologists in the United States, who have had many years of experience in dealing with these two pests, have developed several useful techniques. One important

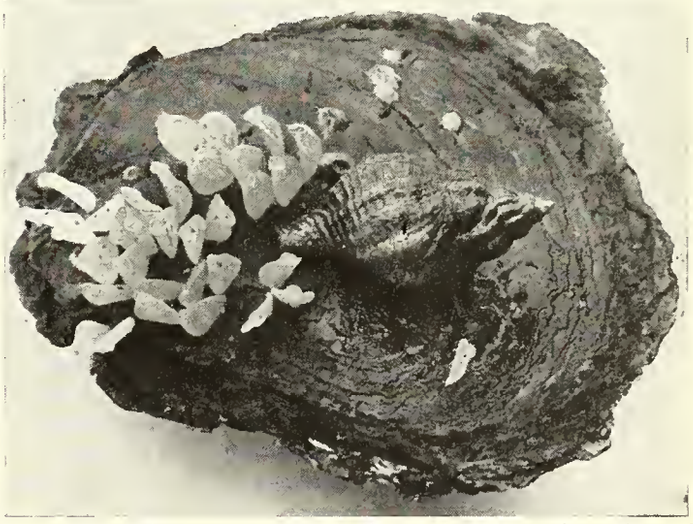


PLATE 1: *The American whelk tingle* (Urosalpinx) *and capsules of its spawn attached to an oyster.*



PLATE 2: *Pieces of lime-coated artificial collectors for oyster spat showing (A) normal settlement of barnacles and oyster spat on untreated surfaces; (B) reduced barnacle set and increased oyster spatfall on surfaces treated with DDT.*

method they have used with success during transplantation involves the dipping of the oysters, or dredge loads of material from the beds, in a saturated solution of common salt. The method has also proved effective in this country, where it has been found that dipping for ten minutes in the saturated solution, followed by exposure to air for one hour, results in the death of virtually all slipper limpets and other competitors except barnacles. The solution also kills eggs and embryos of the American tingle in their spawn capsules. It does not, however, affect the adult or even the newly hatched tingles.

Starfish are a great enemy of oysters in the United States and in some places in this country. The saturated salt solution destroys them amongst the dredged material, but a more spectacular destruction is brought about by scattering quicklime or hydrated lime on the water over a starfish-infested bottom. Particles of lime settling through the water on to the starfish attack the sensitive surface membrane, causing a gradual disintegration of the animal (Plate 4).

Copper sulphate is another chemical that is useful for killing American slipper limpets and other competitors. It has a particular value for destroying competitors that have settled with young oysters on the spat collectors previously mentioned. Carefully chosen strengths are effective without harming oysters, and again the chemical is toxic to the eggs and embryos of tingles whilst they are in the spawn capsules. So far there is no known chemical that will kill adult and newly hatched tingles without killing oysters, though a recent American technique is reported to have great possibilities. It involves mixing heavy oils like orthodichlorobenzene with a dry sand. The mixture is then used as a barrier around previously cleaned oyster beds to prevent the re-entry of crawling predators. Alternatively, the sand, if sprayed over the oyster bed, will kill animals already present and prevent their larval stages from settling. Incorporation of other compounds like the insecticide Sevin (1-naphthyl-N-methyl-carbamate) or 2-chloro-1-nitropropane increases the efficiency of the method, but no large-scale trial has yet been made in this country.

Diseases and Pests

Intensive studies of oysters throughout the world have resulted in a greatly increased knowledge of the diseases to which they are subject. Fortunately there appears to be only one, known as Dutch shell disease, which is of economic importance in this country. The causative organism has not been fully described, but is almost certainly a marine fungus. The spores settling through the water on to the oyster shells germinate and the fungal threads penetrate to the soft tissues below. Normally the soft parts of the oyster secrete fresh shell over the ends of the threads but once the muscle attachment becomes infected a pathological condition is set up, the shell becomes badly distorted and finally the muscle becomes detached from the shell and the oyster dies (plate 5). Little can be done to kill the fungus in a severely infected oyster, but in Holland considerable success is claimed for the control or prevention of infection of young oysters by dipping them in 50 parts per million of mercuric chloride for two hours. This treatment has the additional advantage of killing off other shell pests such as barnacles and slipper limpets without harming the oyster.

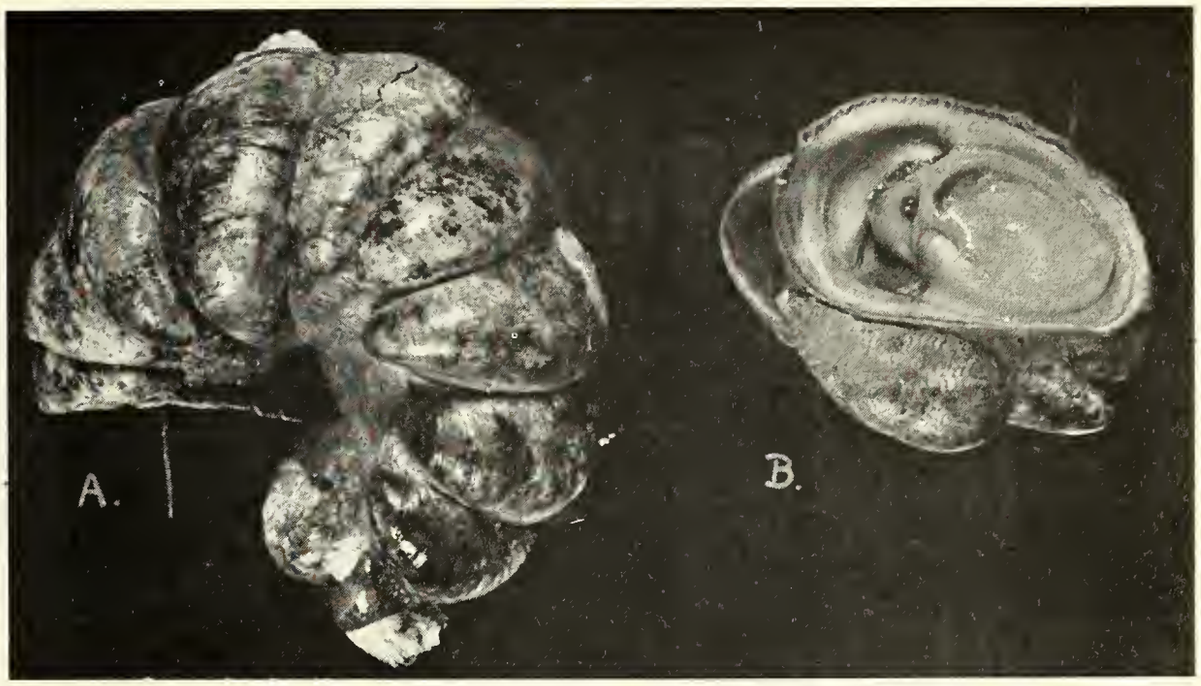


PLATE 3: *The American slipper limpet* (Crepidula) *showing* (*A*) *a chain of individuals and* (*B*) *a detached individual mollusc.*

Oyster shells may also become badly infected by a boring sponge (*Cliona*), which can be destroyed by any of the chemicals so far mentioned or even by exposing the infected oyster between tide marks for a week. Fortunately this sponge is not particularly common, but another shell-boring organism, a worm (*Polydora*), is more widespread. The worms make U-shaped burrows in the shells and as many as 350 may be found in the shells of a single oyster (plate 6). Heavily infested shells become so eroded and brittle that sudden contraction of the oyster's adductor muscle may sometimes snap the shell. *Polydora* may be killed by immersing the oysters in fresh water for twenty-four hours or in a 1 part per 1,000 solution of phenol for four hours. Slightly weaker phenol solutions cause the worms to wriggle out of the shells, and this technique can be used successfully for making counts and assessing the degree of infection. These methods are, however, only temporarily successful in ridding the shells of *Polydora,* and the rate of reinfection is so high that little advantage is to be gained from such treatment.

Purification

Filter feeding shellfish extract and ingest particulate matter from the water. As a result, a number of organisms, including bacteria, become concentrated in the gut, and where there is any pollution of the water there is a consequent health risk to the consumer. For this reason public health authorities keep a careful check on all shellfish, and where there is any danger that these shellfish may be polluted it is obligatory on the part of the oyster farmer to ensure that his oysters are purified. Fortunately oysters immersed in clean sea-water soon empty their intestines and discharge material contained in the shell cavity. The water in which they are placed to cleanse themselves may be sterilised in a variety of ways, but the original technique of sterilising the water with chlorine is still widely used. The chlorine is released either from bleaching powder or from one of the proprietary bleaching agents. The excess chlorine is neutralised with a solution of hypo (sodium thiosulphate) and the oysters are then introduced into the sterile water and allowed to cleanse themselves. In inland areas it is possible to use artificial sea-water,



PLATE 4: *Common starfish or "fivefingers"* (Asterias) *disintegrating after treatment with quicklime.*



PLATE 5: *Inner surface of the shell of an oyster badly infected with Dutch shell disease, showing discoloration and malformation of the shell, particularly at the point of attachment of the adductor muscle.*

provided the ingredients (NaCl, $MgCl_2$, $MgSO_4$, $CaCl_2$, KCl) are carefully measured. Oysters may be cleansed and stored in such water, but in these circumstances sterilisation is achieved by means of ultra-violet light.

Artificial Rearing

The success or failure of an oyster spatfall is dependent on the weather and, since it is essential for the oyster farmer to have a continuing and steady annual supply of young oysters, the possibility of rearing the larval stages to spatfall in hatcheries is being investigated. Adult oysters kept in water at a temperature of 20°C. will breed and release larvæ provided they are adequately fed. The larvæ also require feeding to allow them to grow on to settlement. Oysters normally eat vegetable matter, especially minute plants. A small diatom, *Phaeodactylum*, approximately 3/100 mm. in length, is used as food for the adult oysters. It may be grown in mass culture in sterile sea water with added phosphate and nitrate, or alternatively in a completely artificial medium. The food of the larvæ is even smaller—1/100 mm. in length—and that again may be mass-cultured in sterile conditions in an artificial medium and fed to the larvæ at regular intervals. Finally it has been found that, under artificial conditions, bacteria that multiply in the larval rearing containers may seriously impede the growth of larvæ or even cause heavy mortalities. Bacterial development is reduced by judicious use of the antibiotics penicillin and streptomycin. In this way it is now possible to rear batches of up to 500,000 oyster larvæ and achieve a survival of over 50 per cent. to the settlement stage—a very different result from the 10 per cent. survival occurring in nature at times of exceptionally heavy spatfall.



PLATE 6: *Oyster with shell badly eroded by burrows of boring worm* (Polydora).

It may be seen that, despite the comparatively recent recognition of the need for scientifically controlled exploitation of Britain's marine resources, a wide variety of chemicals have already been found to have an application to all aspects of oyster culture. As techniques improve, chemicals will have an increasingly important part to play in the industry's development. *Photographs by Peter J. Warren*





PREPARING EDIBLE OYSTERS FOR SALE

Left: Small boats collect the catch from the dredgers and bring it to the oysterage.

Below, left: The oysters are cleansed in sterile water.

Below: Grading by hand.



Photographs by Felix Fonteyn



Cytogenetics AND THE PHARMACIST

STEPHEN B. CHALLEN, Ph.D., *School of Pharmacy, University of London*

SOME aspects of cytology and genetics are introduced during the training of a pharmacist, but certainly at the intermediate level the application of those subjects to pharmaceutical studies may appear unimportant. An elementary knowledge of cytology, in particular a knowledge of the nucleus and of inheritance, does, however, help to give a better understanding of the mode of action of some common drugs, of the resistance of organisms to chemotherapeutic agents and of the chemical variations that occur in medicinal plants. Several human ailments are known to be inherited, and the existence of certain blood disorders may be explained genetically.

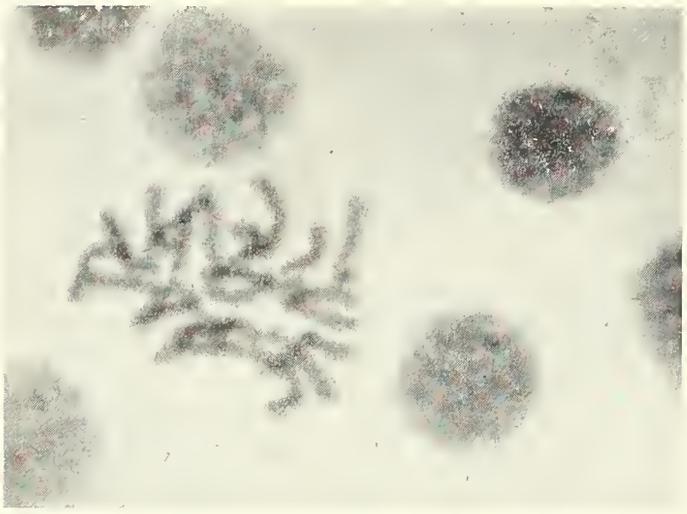
Drugs Affecting the Nucleus

There is immense variation in the chemical structure and mode of action of substances that interfere with the normal structure and behaviour of the nucleus. Differences in type of action are due mainly to the complexity of cell division, hence a satisfactory classification in terms of chemical structure and biological response is difficult to achieve. Some substances are specific in action on the nucleus for a particular stage of the mitotic cycle metaphase (fig. 2) for instance, while other substances alter chromosome structure by interference with the resting nucleus (interphase) and result in chromosome fragmentation or breakage, yet a large number of agents block mitosis completely. The term "mitotic poison" is therefore widely used in describing the effects of chemicals on nuclear division, but it has been applied in different ways by different workers, and hence the use or misuse of the term has been the subject of much discussion.[1, 2, 3] The mitotic cycle[4, 5] may be studied microscopically in plants and animals, using a suitable staining process, or even seen in living tissues, using special techniques. The "feulgen" technique is extremely useful for examining mitosis, as the intensity of staining with leucobasic fuchsin after treatment of the tissue with hydrochloric acid at a critical temperature is related to the amounts of deoxyribonucleic acid (DNA) present in the nucleus. The mechanically active phase of nuclear reproduction is closely associated with the appearance of polymerised DNA on the chromosomes, and it has been shown that cells which contain little or no DNA do not divide, and that continued synthesis of this form of nucleic acid, probably from ribonucleic acid (RNA) is essential for further nuclear reproduction. Therefore any substance or agent that will regulate the production of DNA will regulate the mitotic cycle.

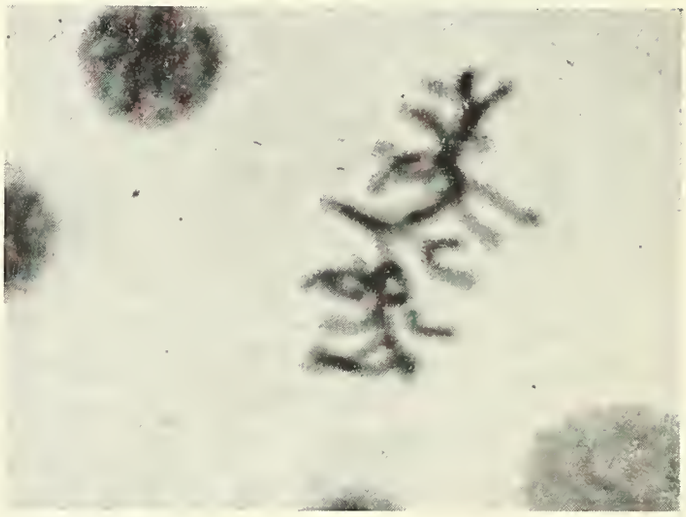
The effects of colchicine[7] on the mitotic cycle have probably been studied more than those of any other substance, and the chemical isolated from corms and seeds of the autumn crocus, *Colchium autumnale,* is of historic interest as a spindle inhibitor that arrests mitosis at the metaphase. Derivatives of colchicine have varying potency as spindle inhibitors and colchiceine, and the glucoside colchicoside, are much less potent than colchicine itself and occur in the crude drug. Mitotic arrest is also produced by the resin obtained from the rhizomes of *Podophyllum peltatum* and *P. emodi,* and the cytological effects are attributed to podophyllotoxin, although the peltatins which are also constituents of the resin have similar effects. Both colchicine and podophyllotoxin are effective in plant and animal tissues, while an extract of *Juniperus sabinæ* (savin) is reported to give mitotic failure in animal cells. Agents that exhibit the same effect as colchicine are termed "C-mitotic" and their action on the cell results in the production of a polyploid resting nucleus, the chromosome number being a multiple of the number present before treatment. Withdrawal of the drug brings about recovery and normal mitosis follows. Antimitotic effects have been reported for a large number of natural products including the coumarins and scopoletin, and a number of alkaloids such as morphine, quinine, emetine and veratrine, may be "C-mitotic," though the validity of the action of some of them has been contested. Griseofulvin is now well known for its antifungal properties, with uses in agriculture and medicine, and it has been demonstrated that the antibiotic in some respects resembles in action that of colchicine in arresting mitosis at metaphase.[8] Griseofulvin is, however, much less toxic in animals than is colchicine in the doses required to produce metaphase arrest. The control of annual grasses may be achieved by using isopropyl N-phenyl carbamate (IPC),[9] and that compound, as well as other carbamates, has a lethal effect on plant tissue owing to its interference with the mechanism of cell division. Though spindle formation is inhibited and the chromosomes consequently fail to arrange themselves equatorially during metaphase, it is not clear whether the carbamates retard growth by acting directly on the dividing nucleus or whether blockage at a particular stage is a result of a more fundamental action. The nitrogen mustards are quite different in action, as they are radiomimetic poisons, causing mitotic damage similar to that caused by ionising radiations, and producing chromosome breakage in the region of the euchromatin (fig. 5) whereas the action of maleic hydrazide,[10] a plant-growth depressant, is accompanied by breakage of chromosomes in the region of the heterochromatin, a toxic effect which in this instance is confined to plant tissues.

THE MITOTIC CYCLE

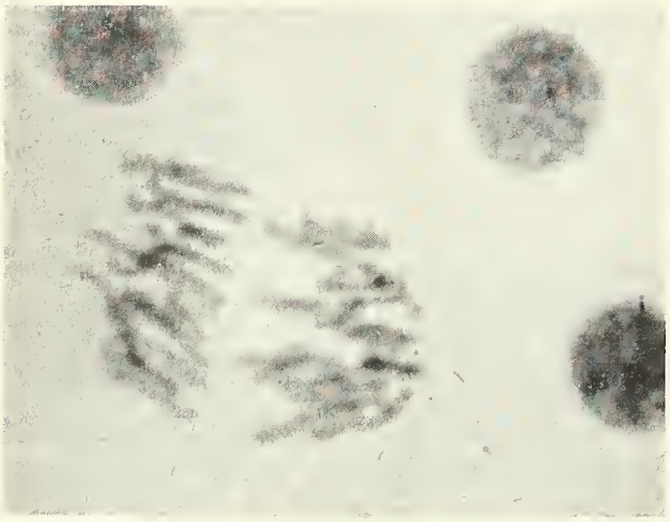
Showing chromosomes in stages of division and nuclei at interphase (x 1,000)



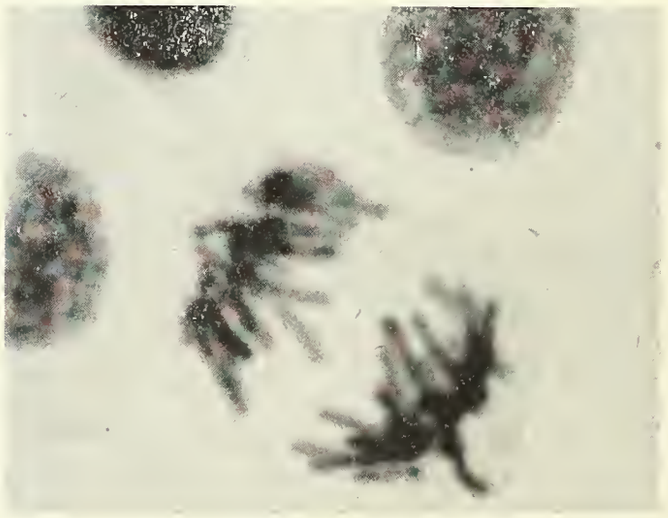
1. Prophase



2. Metaphase



3. Anaphase



4. Telophase

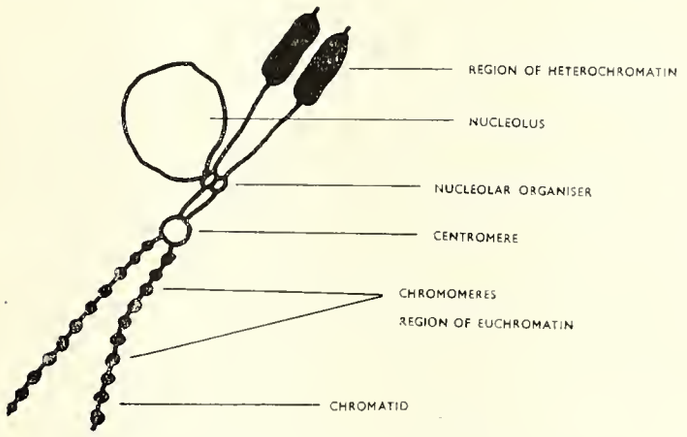
Resistance to Drugs

It is now well established that the prolonged and widespread usage of a chemotherapeutic substance often leads to the appearance of resistant strains of the organism which the chemical is designed to eradicate. The development of resistant strains may be due to the use of sublethal doses of the drug, which promote tolerance of the organism or gene mutation, or may simply be a result of Darwinian selection. The frequency of bacterial gene mutations may be increased by the presence of antibacterial substances and usually the resistance that is developed is both specific and a matter of degree. Penicillin-resistant staphylococcus mutants differ in shape and in Gram-staining properties from sensitive strains and changes at several loci, forming characteristic resistance patterns[11] have, owing to the extent of gene mutation, been recognised. A "step-wise" mutation has been demonstrated using low-level concentrations of penicillin, producing low-level resistant mutations; varying concentrations to a high-level concentration give rise to high-level resistant mutants. That is the commonest type of resistance pattern, and the problem is overcome by the use of an initial high-level dose, a practice that is well recognised. Another type of pattern is produced by streptomycin, involving a "one-step" bacterial mutation in the presence of high concentrations of the drug, without previous tolerance to small concentrations. Such a situation may be avoided by using a mixture of antibacterial agents. It is possible that, in the first type of resistance pattern, gene mutations occur at different loci concurrently, and in the second type at several loci at once. In resistance to insecticides, genes that are responsible for high levels of resistance have been shown to be inherited according to Mendelian principles, and resistance is unlikely to be acquired by mutation or tolerance developed in response to sublethal doses. It is probable that genes for resistance occur in untreated populations, and the appearance of resistant strains is controlled by the existence of dominant and recessive genes and the intensity of the process of selection. The occurrence of dissimilar gene pairs (the heterozygous condition) and similar gene pairs (the homozygous condition) will affect the degree of resistance and susceptibility in a given population of insects. A mixed population of insects therefore behaves differently when chemical treatment is discontinued as compared with a pure homozygous resistant strain, of which succeeding generations would also be resistant without chemical inducement.

Genetics of Medicinal Plants

Qualitative and quantitative variations in the chemical constituents of vegetable drugs may often be explained in terms of genetical control. A tetraploid (4 x) species of *Artemesia*[13] exists that is apparently free of santonin,

whereas a diploid species (2 x) produces santonin. The toxicity of Aconite[11] species, too, varies with chromosome number, the triploids (3 x) and tetraploids being highly poisonous. Similarly the ascorbic acid content of rose hips[15] differs significantly as between diploids and octaploids (8 x). Variations in chemical constituents may be interspecific or infra (intra) specific,[16] and accompanying genetical variation is frequently numerical, owing to differences in whole sets of



5. Detailed chromosome structure, diagrammatic representation.

chromosomes, as in euploids. They are thus distinct from aneuploids, in which genetical variation occurs in regard to single chromosomes. Although there appears to be no information on the glycosidal changes that may occur in the progeny of a reciprocal cross between *Digitalis purpurea* and *D. ambigua*, a new species[17] has been produced by the method. The result is an allopolyploid (amphiploid) and the nucleii contain two different sets of chromosomes (tetraploid ($2x_1 + 2x_2$)), with sets from each parent. The latter contrasts with the tetraploid and octaploid forms of *Valeriana officinalis*[18] which are autopolyploids, resulting from the multiplication of existing sets within the same species. There is ample proof of the occurrence of "chemical races"[19] amongst wild populations of plants, such races having similar phenotypes, being identical morphologically but having different genotypes. In such cases variation in chemical constituents is related to genetic differences, and that is especially significant in *Duboisia* species, where the proportion of one individual alkaloid to the total alkaloid varies. Vitality and vigour in cultivated plants is also genetically controlled, and it is sometimes due to the presence of accessory "B" chromosomes,[20] which accompany the "A" chromosomes of the normal complement. The effects of "B" chromosomes are not so specific as the "A's". They are of unknown ancestry and are distinguishable from the "A's" in size and number. Varieties of *Datura* that contain "B" chromosomes are distinctly weaker and smaller than those varieties that are without "B" chromosomes.

Induced Changes

Induced genetical changes, which are produced by various agents, are of special interest in connection with plant improvement. For this purpose *x*-ray irradiation,[21] and more recently cobalt 60 and other products of atomic fission, have been employed to raise the frequency of chromosome and gene mutations. Spindle inhibitors such as colchicine have proved valuable in bringing about changes in chromosome number, and a resultant increase in alkaloid has been demonstrated in *Datura*[22] and *Lobelia sp.*[23] Increased yields from other plants illustrate the beneficial effect of polyploidy. An increase in chromosome number need not, however, be beneficial, for tetraploids can be inferior in some respects to their diploid parents and chemical treatments sometimes give rise to periclinal ploid-chimeras[24] which are abnormal owing to the existence of tissues of different genetical constitution within the same plant. Also the frequency of aneuploids may be increased, for example in *Datura* polysomics,[25] where the ordinary members of the basic (x) chromosome complement are replicated several times. Hence, with the trisomic genotype ($2x + 1$), one type of chromosome is replicated three times in the vegetative cells and in the tetrasomic ($3x + 1$), one type of chromosome is replicated four times. The secondary trisomic ($2x + 2$) exists when two types of chromosome occur three times. Those extra chromosomes differ from "B" chromosomes as they are derived from "A" chromosomes. Polysomics are generally unbalanced and are short-lived, and it is of special significance that the trisomic condition is now known to occur in man, with the production of the mongol offspring.

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A PHARMACIST'S ANTHOLOGY

A PLEASANT LABORATORY

From *The Martian* by George Du Maurier

IN the winter of 1853, just before Christmas, my father fitted up for me a chemical laboratory at the top of the fine old house in Barge Yard, Bucklersbury, where his wine business was carried on, a splendid mansion, with panelled rooms and a carved oak staircase—once the abode of some Dick Whittington, no doubt a Lord Mayor of London; and I began my professional career, which consisted in analysing anything I could get to analyse for hire, from a sample of gold or copper ore to a poisoned stomach. Lord Whitby very kindly sent me different samples of soil from different fields on his estate, and I analysed them carefully and found them singularly like each other—I don't think the estate benefited much by my scientific investigation. It was my first job, and brought me twenty pounds (out of which I bought two beautiful fans—one for my sister, the other for Leah Gibson—and got a new evening suit for myself at Barty's tailors). When this job of mine was finished I had a good deal of time on my hands, and read many novels and smoked many pipes, as I sat by my chemical stove and distilled water, and dried chlorate of potash to keep the damp out of my scales, and toasted cheese, and fried sausages, and mulled Burgundy, and brewed nice drinks, hot or cold, a speciality of mine. I also made the laboratory a very pleasant place . . . I smuggled in a guitar (for Barty) and also a concertina which I could play a little myself. Barty often came with friends of his, of whom my father did not approve—mostly Guardsmen; also friends of my own—medical students, and one or two fellow chemists, who were serious, and pleased my father. We often had a capital time; chemical experiments and explosions, and fearful stinks, and poisoned waters of enchanting hue; also lobsters, oysters, dressed crab for lunch—and my Burgundy was good, I promise you, whether white or red! . . . These debauches generally happened when my father was abroad.

A Historical Account of the WEIGHTS, METS AND MEASURES OF SCOTLAND

C. G. DRUMMOND

Diverse Weightes, and diverse Measures, both these are an abomination unto the Lord.—PROVERBS, chap. 20, verse 10.

THOSE words appeared on the title page of a book on the weights, mets and measures of Scotland, written by Alexander Huntar, Burges of Edinburgh, and printed in 1624 by John Wreittoun, "to be sold at his Buith at the Nether Bow," and must have appealed to him as having a certain appropriateness to the subject of his treatise. It would seem, from a perusal of the records, that the struggle to secure justice for the purchaser is as old as trade itself, and that, from earliest times, authority in one form or another found itself compelled to protect the lieges from the unscrupulous and the indifferent.

Early Legislation

An examination of the early historical records of Scotland reveals that diverse weights and diverse measures engaged the attention both of Parliament and of the magistrates. The Scots Parliament of King David I (1084-1153) passed legislation dealing with the problem, in which it was decreed that "those who use unequal and false weights [were] to be fined eight cows to the King." The penalty had the merit of originality, though the document gives no reason for the number. A later Act of the same reign ordered that persons convicted of false weights and measures were to be fined for the first, second, and third offence. For a fourth conviction offenders were ordered to be at the King's mercy and their heirs disinherited. About the same time, in the twelfth century, attempts were made to secure standards, it being laid down that a Scottish gallon was the measure of 12 pounds of "diverse waters"—a definition that could not offend local susceptibilities. There were later variants of the formula, in which a particular water was used for the purpose of fixing the standard. In 1425, for example, the pint was declared to be 41 ounces of the water of the River Tay, an arrangement, one supposes, appropriate to the fact that Parliament met on occasion in the City of Perth. Still later, in 1617, the pint was 3lb. 7 oz. of French Troy of "clear running water of Water of Leith" equal to three Imperial pints by our reckoning of today.

Parliament, through the centuries, continued to express concern, being concerned to set standards and to enforce them, as the following extracts show:—

1365 The chamberlain at his ayre (earliest) to enquire if the bailies cause the Weights and Measures to be examined, and if all weights and measures sealed with the burgh seal.

Also whether bailies observe the weights authorised by the bailies and how often they are fined in the year.

1457 Weights and measures throughout the realm to be enforced.

1467 Chamberlain and sheriffs to see that the last act regarding weights and measures to be enforced.

1491 Weights and measures to be of one standard, fixed by King and chamberlain.

To modern ears, some of the standards have a strange sound, but historically they are of great interest etymologically as in the table of measures for grain and meal:—

Four lippies	.. ..	one Peck
Four pecks ..	.. ..	one Firlot
Four firlots ..	.. ..	one Boll
Sixteen bolls	.. ..	one Chalder

That seemingly incomprehensible jingle becomes easier to follow when one learns that a "lippie" (or forpit) derived its name from the old English leap, a basket. "Forpit," a word still in common use in parts of Scotland, meant a fourth part, and in Edinburgh today one may still hear the word applied to meal or potatoes, though its present-day meaning is the somewhat odd quantity of three-and-a-half pounds, or a quarter of a stone. The firlot, strangely enough, was derived from old Norse, and became, in corrupt form, firlot or fourth lot. Chalder, on the other hand, is a little more obscure in origin, but is thought, with some reason, to derive from the French *Chaudron*, an old coal measure.

Parliament was not alone in its concern, for the burgh records of the City of Edinburgh make frequent reference to the subject. It was to the local authority that Parliament looked to enforce the Acts on weights and measures, an arrangement that persists to the present time. As early as 1450, the following entry appears:—

Item, that all merehands frae hyne furth sell irne, [iron] walx [wax] and uther merchandise be wecht weiyit with the troyne and with na either, under the payne of eseheitt of the guidis.

"Escheitt," or forfeiture, of the goods gave way in time to more severe penalties. On May 6, 1511, the provost, baillies and council considered a complaint made by one Richard Patersoun concerning the hurt suffered by the lieges at the over or butter tron due to the selling of false weights of wool, butter, cheese, and "siclyk stuff." The council ordered "in remeid thairof according to the commoun law that all stane wechtis should be equale." The council ordained that every stone was to weigh 16 lb. and every pound 16 ounces, "half stane, quarter stane and pund efferand (i.e., proportional) thairto, and that the [they] use nane uther under the pane of escheting of the wechtis and banessing of the toun." So we find that confiscation has had added the further penalty of a ceremonial—or perhaps unceremonial—procession to the gates of the city, and an official farewell at the West Port.

A Proclamation

Measures seem also to have been the cause of public dissatisfaction, for on 23 August, 1581, the council issued a proclamation about the measures to be used, as there had been "ane greitt diversity of pek and furlot and siclyke," to the great hurt of the poor and all the lieges. The council ordained that all measures must be agreeable to the town's measures lately made, under pain of breaking of their other measures and pay-



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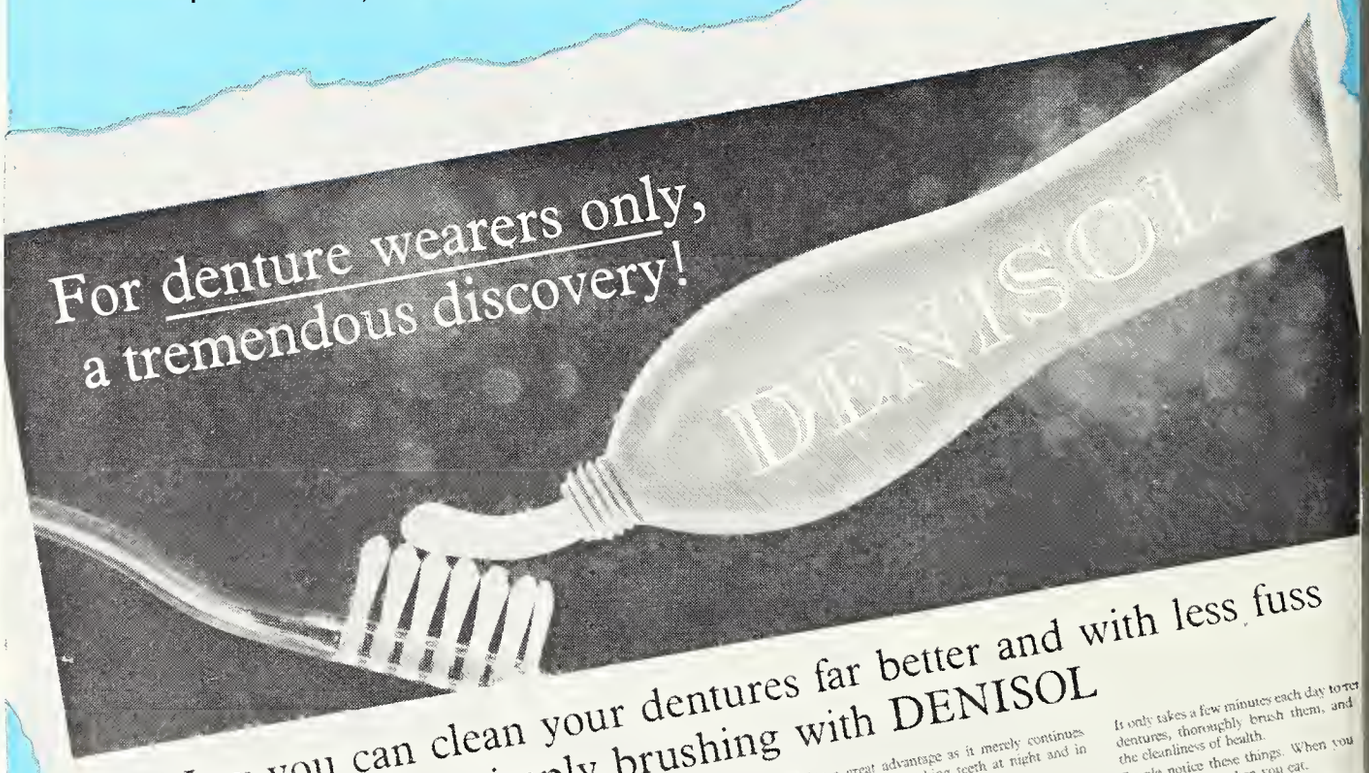
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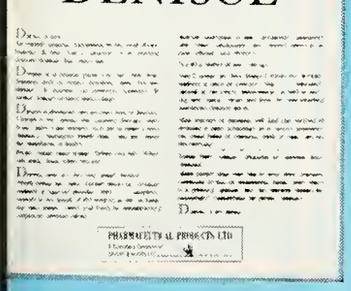
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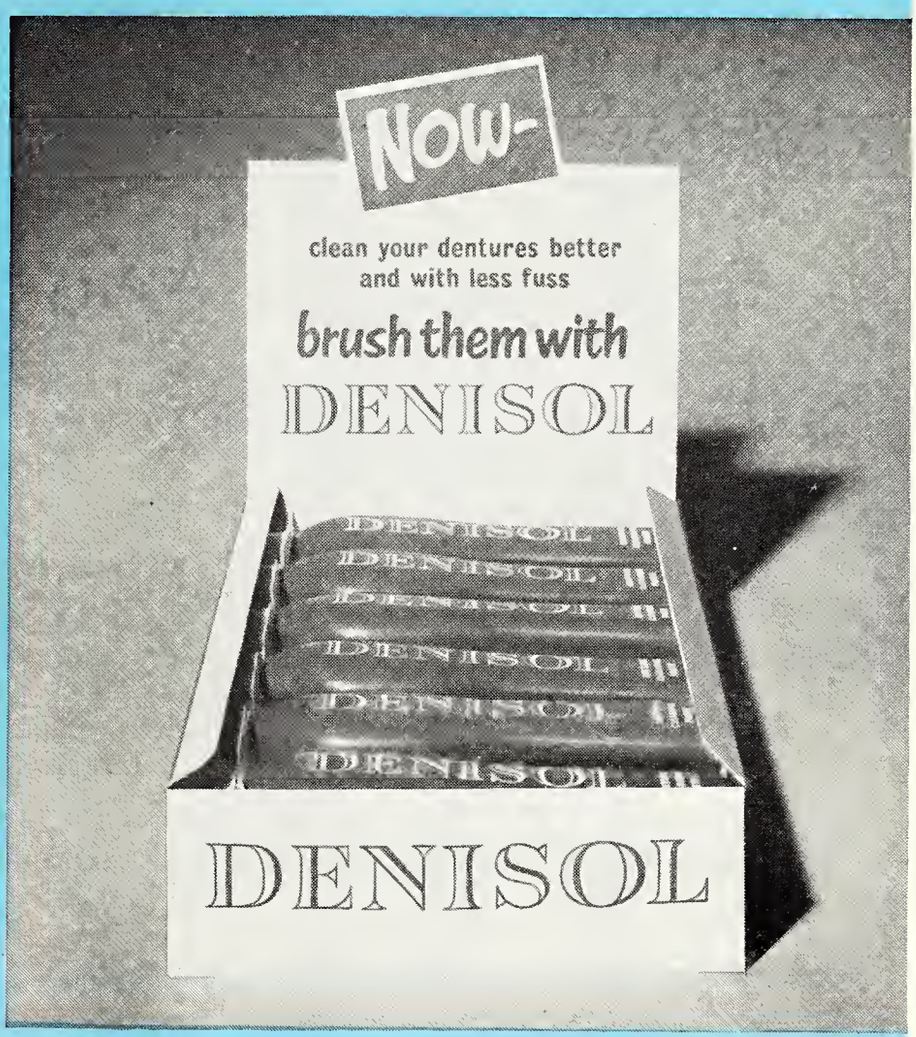
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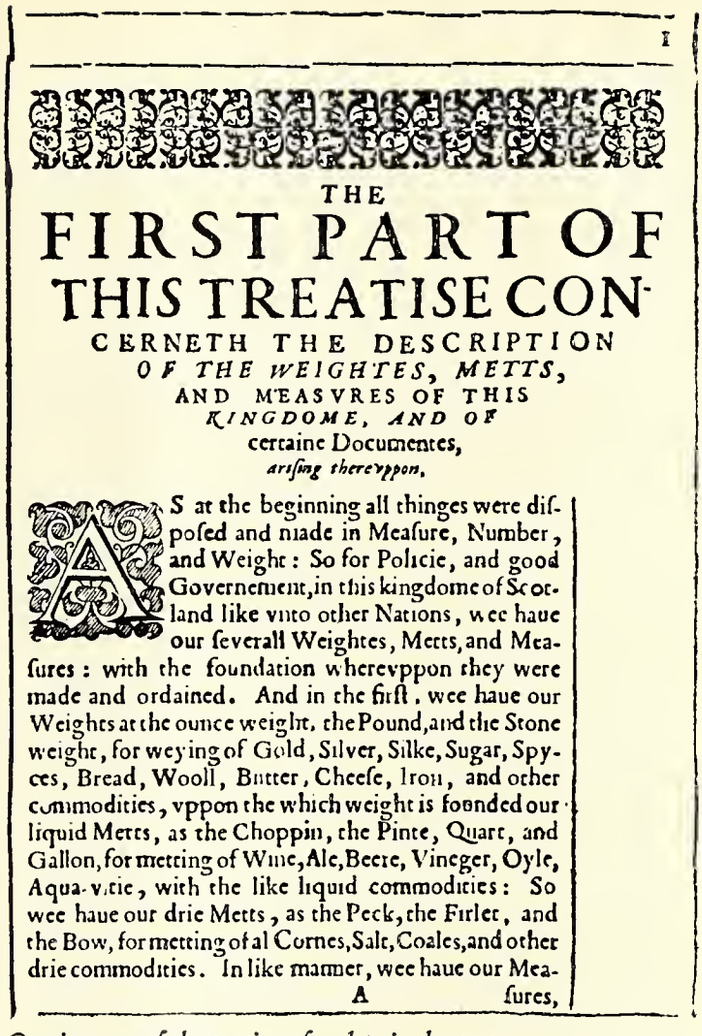
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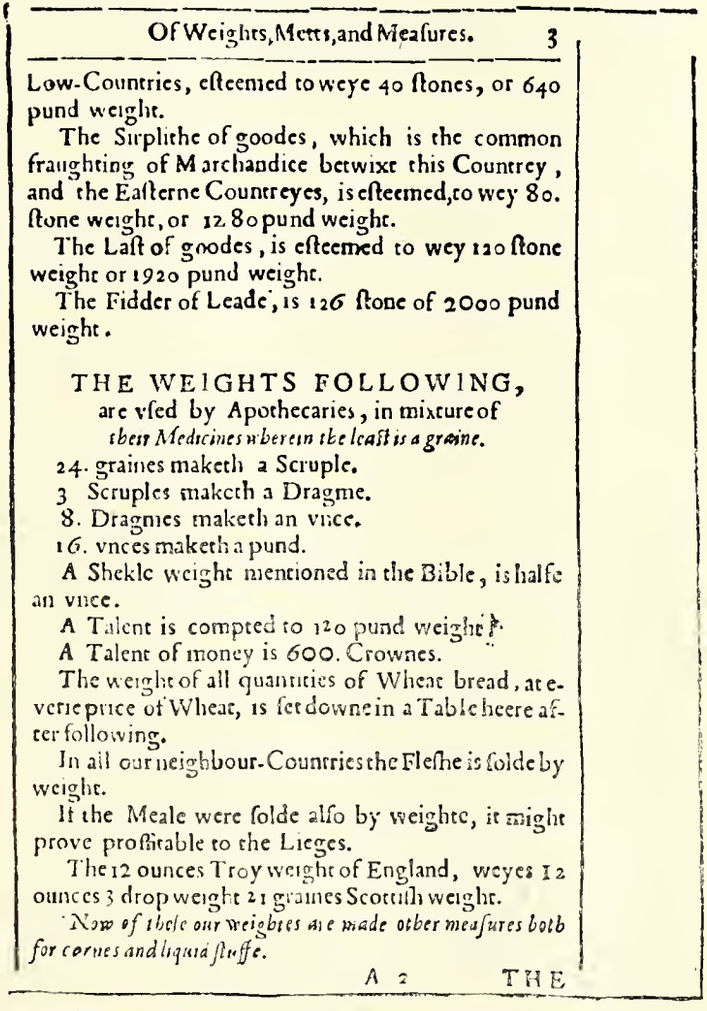
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THE
FIRST PART OF
THIS TREATISE CON-
CERNETH THE DESCRIPTION
OF THE WEIGHTES, METTS,
AND MEASVRES OF THIS
KINGDOME, AND OF
certaine Documentes,
arising thereuppon.

AS at the beginning all thinges were disposed and made in Measure, Number, and Weight: So for Policie, and good Governement, in this kingdome of Scotland like vnto other Nations, wee haue our severall Weightes, Metts, and Measures: with the foundation whereuppon they were made and ordained. And in the first, wee haue our Weights at the ounce weight, the Pound, and the Stone weight, for weying of Gold, Silver, Silke, Sugar, Spyces, Bread, Wooll, Butter, Cheese, Iron, and other commodities, vppon the which weight is founded our liquid Metts, as the Choppin, the Pinte, Quart, and Gallon, for metting of Wine, Ale, Beere, Vineger, Oyle, Aqua-vitie, with the like liquid commodities: So wee haue our drie Metts, as the Peck, the Firlet, and the Bow, for metting of al Cornes, Salt, Coales, and other drie commodities. In like manner, wee haue our Mea-

A sures,

Opening page of the treatise referred to in the text



Of Weights, Metts, and Measures. 3

Low-Countries, esteemed to weye 40 stones, or 640 pund weight.

The Sirplithe of goodes, which is the common fraughting of Marchandice betwixt this Countrey, and the Easterne Countreyes, is esteemed, to wey 80. stone weight, or 1280 pund weight.

The Last of goodes, is esteemed to wey 120 stone weight or 1920 pund weight.

The Fidder of Leade, is 126 stone of 2000 pund weight.

THE WEIGHTS FOLLOWING,
are vsed by Apothecaries, in mixture of
their Medicines wherein the least is a graine.

24. graines maketh a Scruple.
3 Scruples maketh a Dragme.
8. Dragmes maketh an vnce.
16. vnces maketh a pund.

A Shekle weight mentioned in the Bible, is halfe an vnce.

A Talent is compted to 120 pund weight.

A Talent of money is 600. Crownes.

The weight of all quantities of Wheat bread, at everie price of Wheat, is set downe in a Table heere after following.

In all our neighbour-Countries the Flesh is solde by weight.

If the Meale were solde also by weighte, it might prove profitable to the Lieges.

The 12 ounces Troy weight of England, weyes 12 ounces 3 drop weight 21 graines Scottish weight.

Now of these our weightes are made other measures both for cornes and liquid stuffe.

A 2 THE

Weights used by Apothecaries "in mixture of their medicines"

ment of ten pounds as often as they fail. Within five years the searchlight was directed on those who sold liquid "refreshment" to a public who liked just measure—a curious propensity which manifests itself to the present day. The item is interesting as it is the first mention I found of official stamping of accurate measures. (There may have been something of the kind at an earlier date, but in my search this was the first reference.)

The proclamation, dated 21 October, 1586, charged that for avoiding of great fraud and deceit by the taverners and tapsters, vendors of wine and ale, and other wicked person, that all who had "fals stowpes, clowrit in the sydes," or any measure which did not conferm to town standard, had to submit measures to be stamped, under pain of £5 for the first offence, £10 for the second, and for the third (stern retribution), "escheting of the piece, pype, punsheon or barrell, breaking of the stowpes, dealing thereof to the poor, and tynsall of their freedom." (The word "tynsall" means loss, and so the third offence carried with it a term of imprisonment.)

Legislative Pattern Takes Shape

Thus, step by step, we see the pattern of today's legislation taking shape. First, there is the decision as to what constitutes a standard, followed by the compulsion to conform to the standards, and now the stamping of measures. In effect, apart from alteration of the standards through the centuries, there has been little change in the method of application of the statutes since the sixteenth century. But on October 3, 1589, the town council of Edinburgh remembered Juvenal (quis custodiet ipsos custodes?) as the following minute shows:— "In respect the auld braysin wechts are worn and broken and thairby become unjust, ordains the dean of gild to cause mak thame ower agane and to just thame." It was realised how vitally important it was to have the standards exact, and the Dean of Guild carried out his instructions and presented the bill:—

Gild Accounts

The compter discharges himself with the expenssis debursit be him upone the reparing and reforming the townis braissin wichts be ordinance of counsell the third day of October anno 1589. Item, upon the xxviij day of November payit to David Rowen for casting thir wechtis our agane and justing the samen, quhilk was done with the auld brasin wechtis and certane fals wechtis that was tane fra the craymerie [merchants' booths] to augment the samin with and castin to ane stane, half stane, quarter, half quarter, pund and half pund trone wechtis, quhilk is in trois wechtis xxxvil lib. at iij ilk pund casting .. .. 5li. 14s.
Item, for four pund of leyd to mixt with the brass .. 4s. 8d.
Item, ane pynt off wyne to David Rowen at the casting of thir wechts .. .. 6s.
Item, to his servant in drink sylver .. .. .. 3s. 4d.
Item, for carrying the auld wechtis to David Rowen and the new wechtis agane fra him to the Counsall hous 3s.
Item, to John Bartane, goldsmyth, for making the form of thrie castellis to put upone thir wechtis (i.e., the stamp) 20s.
Item mair, coft (i.e., bought) fra Jon Padein and John Hog, potter four trois stane of brass thairof to mak ane new trone twa stane wecht, payit for ilk pund thairof iijs .. .. 9li. 12s.
Item, to David Rowen for casting and making the samin being xxxviij li at iijs ilk pund .. .. 6li. 14s.
Item, for thrie li. off leid to mixt the brass .. .. 3s. 6d.
Item, to David Rowen at the melting heirof ane choppin of wyne .. .. 3s.
Item, to his servant in drink silver .. .. .. 2s.

It will be noted that, in the heat of the day, the thirst of David Rowen did not go unquenched, nor was his servant forgotten.

Standard for the Whole Country

An Act of Parliament of 1618 laid down standard weights and measures for the country as a whole, based on accepted standards of different towns. For corn, the firlot of Linlithgow was to be standard firlot. The stone weight of Lanark, for weight, the ell (or eln) of Edinburgh for linear measure, and the pint of Stirling were the other standards. (The ell of Edinburgh measured 37 inches.) The stone of Lanark was also known as the Dutch stone, and it weighed 17·39 pounds avoirdupois. The Act referred to adopted French Troy as the standard—known also as Dutch weights.

Troy or Dutch Weights—Act of 1618

27·722 gr. (Imperial troy) = 1 drop
16 drops = 1 ounce (475 grains)
256 drops = 1 lb. (16 oz.)
16 lb. = 1 stone
(1 ounce Scots = 1·086 oz. avoirdupois)

The authority for that Act stemmed from the report of a body of commissioners empowered by Act of Parliament of 1617 to establish "ane just Measure and Weight through all the pairtes of this Kingdome, which shall universallic serve all his Highnes lieges, by which they shall buy, sell, receive and give out in all tyme to come." (The expression "in all tyme to come" is, in the light of present-day developments, found to be inexact.) Such a definite pronouncement evidently inspired Alexander Huntar, burgess of the City of Edinburgh, to publish the book referred to in the beginning of this article. In a modest preface to his work, the author says that he cannot give contentment to all, because some will find fault and dispraise that which others will esteem of, and others will say they could have done much better. "I grant there is many whose skill is better than mine, if they could take the paines, but seeing they are slack in so needful a work, let them not be offended with me in preventing them."

Of the weights and foundations thereof, the author says:—

A corne or pickle of wheat, taken out of the middest ear of wheate, is the foundation of a graine weight.

18 of those graines maketh the half drop weight
36 graines maketh a drop weight
4 drop weight is a quarter of an unce
4 quarters maketh an unce weight
8 unces is a mark weight
2 mark weight is a pund weight
16 pund maketh the stone weight of Lanarke.

An item of great pharmaceutical interest is the table for the use of apothecaries. "The weights following as used by apothecaries, in mixture of their medicines wherein the least is a graine."

24 graines maketh a Scruple
3 scruples maketh a Dragme
8 dragms maketh an Unce
16 unces maketh a Pund.

Further testing of the city's standards was ordered by the Council in 1685, and on December 2 of that year the Dean of Guild reported that he had tested the town jugs "consisting of two pynt jars and one chopen. The chopen and one jug hold just; the other pynt jug is sex drops less than the trew standards. Counsel appoints that pynt jug to be broken and another made in stead throf."

With the Act of Union of 1707, when the Scottish Parliament ceased to have a separate existence, it looked as if the difficulties were over, for by the seventeenth Article of that Act, English weights and measures were made the statutory standards of the United Kingdom. In practice, the matter proved to be less simple, for the article did not take effect, and the older native system continued to be used down to the beginning of the nineteenth century. As late as 1827, at a meeting of His Majesty's Justices of Peace for the County of Edinburgh, in Quarter Sessions assembled, at Edinburgh on March 6, 1827, "there was produced and read a Report from the Committee appointed to consider and report on the subject of Uniformity of Weights and Measures, and a copy of the Popular Tables for this County, which Report and Tables the meeting approved of interponed their authority and enacted and declared THAT from and after the 13th of March current, all returns from the different markets within the county shall be struck and made according to the Imperial Standards only, and that all old weights and measures not having the rates and proportions which they bear to the new marked upon them, according to the Act of Parliament, shall be seized and confiscated." That action, aimed at levelling the differences in local measures of grain, seemed to be the final tidying up of weights and measures subsequent to general legislation in 1824, but one eccentricity was omitted, and that one has haunted successive generations of apprentices and students in pharmacy. Gradually, the druggist was weaned away from the troy or apothecaries' system of weights and measures in the sale by retail of drugs. He fell into line with others selling goods by weight, using the avoirdupois weights for all but dispensing operations. The Act of 1824, as also a later one of 1835, allowed the College of Physicians to fix its own standards, and the Encyclopædia Britannica charged the College with "having prevented the completion of an equalisation of the weights in this country, and of having been the cause of the very needless retention of two, and in some respects three, different standards as applied to medicine, from the use of which arises a tendency to create confusion." The first official recognition of the inconsistency of the position was evident in Scotland with the publication of the Edinburgh Pharmacopœia in 1839, in which the College adopted the imperial standard of measure. In doing so they followed the pattern already followed by the London Pharmacopœia of 1836, but they went further in stating that they could not admit the force of the objections which had hitherto prevented the introduction also of the imperial or avoirdupois system of weights into the practice of medicine and pharmacy. The Dublin College of Physicians considered the matter and came to quite different conclusions.

A Practicable Scheme Turned Down

It will be seen, then, that no little confusion existed in the British Isles. The druggist bought his drugs in the imperial system. He sold them over the counter in the same system, but he dispensed them in two different systems—the apothecary when weighing, and the imperial when measuring. A drachm of solid in Edinburgh and London weighed sixty grains and a scruple twenty, but in Dublin the values of the drachm and scruple were 54·68 and 18·22 grains respectively. A golden opportunity lay ahead to bring about much-needed reform, for within twenty-five years there was to be published the first British Pharmacopœia, replacing and superseding those of London, Edinburgh, and Dublin. It was then essential to adopt a uniform system of weights and measures for use whenever the new pharmacopœia was used. It was recognised that the situation created by its advent was the occasion for fixing on a suitable standard. But, as the elder Pliny tells us, opportunities lost can never be regained and, in retrospect, the opportunity was lost. Many meetings were held to discuss the question, and many suggestions were put forward to find a logical way out of the confusion. There were some who advocated the metric system, but objections were raised on the grounds that only when the country was ready as a whole for such reform would it be wise to adopt it. Perhaps the most ingenious and most practicable scheme was that of Dr. Charles Wilson, an eminent Fellow of the Royal College of Physicians of Edinburgh. Dr. Wilson propounded his views before an evening meeting of the Pharmaceutical Society in Edinburgh in 1859, and he attended a meeting of the Society's Council in London in the same year to attempt to secure support for his theory.

Dr. Wilson felt that what he called "equalisation" of the grain was the solution to all the problems in pharmacy and medicine. Briefly, he wanted the accepted weight of one grain to be changed to a new grain weighing 0·91145 of the existing weight. That meant, in effect, a reduction of approximately one-eleventh of the grain that we know and that the druggists of a century ago were using. The effect of such a small change would be that 480 minims of water would now weigh 480 grains instead of the odd figure of 437·5 under the existing value. 100 grains of water would then, of course, measure 100 minims. Dr. Wilson thought that eventually some form of metric system would come to this country, and his proposals, he thought, would be assimilable without trouble, whatever form the metric system took in the country as a whole. But change is troublesome, and Dr. Wilson's carefully thought out scheme failed to make an appeal to the Society's Council. In his proposed new table of weights, the pound would no longer be 7,000 grains. It would, in the new currency, be 7,680 grains—equal in fact, to the statute pound of England in the reign of Edward I.

To the satisfaction of his opponents, if not to the gratification of a century of students and apprentices, the proposals fell through, and we are now faced with the possibility of having, in our generation, to grasp the nettle which our ancestors regarded as too dangerous to handle.

British College Pharmacopœias

PREDECESSORS OF THE BRITISH PHARMACOPŒIAS

GEORGE ARTHUR NELSON, Ph.D., F.R.S.

The farther backward you can look, the farther forward you are likely to see.—Sir Winston Churchill

FOR more than three centuries apothecaries and, in turn, pharmacists have been required by statute to compound medicines to standard formulas with drugs of predetermined quality.

The earliest mention in Britain of standards for both preparations and drugs was made at a meeting of the London College of Physicians on June 25, 1585, but for various reasons the Pharmacopœia, as it was to be called, was delayed and did not appear until May 7, 1618. That date is one of considerable pharmaceutical significance for, prior to it, prescriptions were compounded in accordance with any of the various current formularies according to the whim of the individual apothecary. Since that time the dispenser has always been conscious of set standards.

The importance which should have attached to a first Pharmacopœia in Britain was marred by internal strife within the College of Physicians; the issue, withdrawn before it became effective, was replaced by another issue on December 7 in the same year.

Fiction of a Second Edition

The December issue, though described on the title-page as a second edition, was in fact a different work. It should instead be considered as the first *operative* London Pharmacopœia and as such is listed as L1a in my definitive list of pharmacopœias (Table 1)—London 1, with "a" to distinguish it from L1, the abortive May issue. The text merely canalised what was considered best in such current ancient works as Avicenna, Mesue, Serapion and others. It appears to have been approved by a committee of senior members of the College, but junior members wanted a more comprehensive volume and pressed for withdrawal with such energy that, by December, they overrode their seniors and were ready with an encyclopædic issue. The latter was no true second edition, and naming it such was merely a face-saving gesture for College members. Edward Griffin, the printer, was made the scapegoat, but comparison of the May and December issues shows clearly that inaccuracies of print played no part in the withdrawal. A further reason for withdrawing the May issue, and one of great consequence, appears to have passed unobserved, namely, that the Royal Proclamation making the Pharmacopœia obligatory on all apothecaries in England and Wales bears the date April 26, 1618; it could not have been in the printer's hands immediately, yet the Pharmacopœia was issued printed and bound, within ten days. It is suggested that Griffin, not knowing when the Proclamation would be available, had bound a number of copies with a blank page for the authorisation. When he received the Proclamation it was inserted only in copies as yet unbound, and thus some apothecaries had evidence of their obligations, whilst others had none. All available copies were immediately recalled by the president and destroyed. The May issue is thus extremely rare.*

The 1618 issues were entitled Pharmacopœa Londinensis (May), Pharmacopœia Londinensis (December). The second London Pharmacopœia, named Pharmacopœia Londinensis Collegarum, was issued in 1650 during the Protectorate, and strangely bears the original dedication to King James I. It differs little in content from its predecessors but must be accepted as a separate Pharmacopœia because of its different title.

The 1650 Pharmacopœia was lavishly produced in folio. Its wealth appears to have been noted by Cromwell, and the College, being ardently royal, was deprived of its funds. The second edition, a miserably produced duodecimo volume which appeared in 1651, shows evidence of the depletion of College finances.

By 1677, when the third Pharmacopœia was issued, sovereignty was re-established and the loyalty of the College recognised by its having been designated Royal. That seems to be the sole reason for a new issue, for the title-page proudly states Pharmacopœia Collegii Regalis Londini though it was little more than a reprint and even retains the original dedication to James I. With the return of funds, however, it was the most lavishly produced of any of our College Pharmacopœias.

So far no material advances had been made, each issue being little more than a reprint of former ones; however, during the forty-four years that elapsed before the next issue, considerable strides were made. With the foundation of the Royal Society in 1660, dogma was abandoned in favour of experiment, and the fourth London Pharmacopœia of 1721 showed evidence of changing thought in the medico-pharmaceutical field. Many unsavoury simples were deleted such as "album graecum" (dog's dung), calculi of the human bladder and "usnea cranii humanii."* Mythical items such as unicorn's horn were also deleted, and for the first time vegetable simples were referred to authoritative works for identity. The Catalogue of Simples is clearly authoritative and is probably the work of Sir Hans Sloane, who was the foremost authority on natural history at the time, and a member of the Royal College of Physicians of London.

The fifth London Pharmacopœia (1746) continues the advances. The few remaining unsavoury items are deleted. So, too, are most of the relics of ancient Greek and Arabian medicine, which were popular at a time when dread of poisoning was prevalent. They were the acme of polypharmacy. For example, the Antidotus Magnus Matthiola adversus Venema et Pestem had 130 ingredients. The title of the previous Pharmacopœia is retained and now becomes a permanent feature: Pharmacopœia Collegii Regalis Medicorum Londinensis.

A Considerable Advance

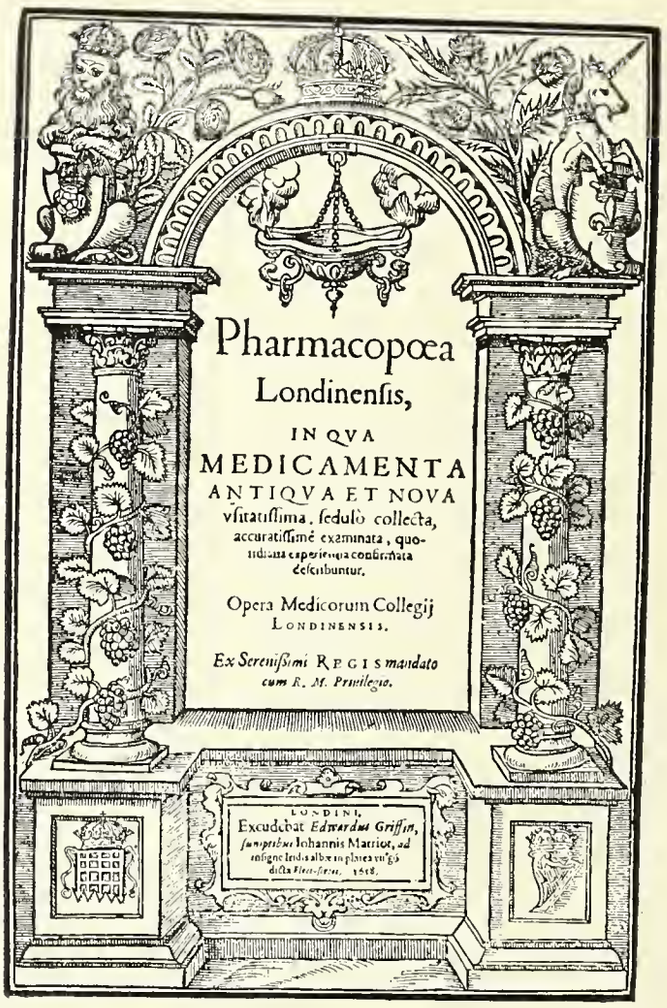
Owing to the influence of Dr. William Heberden, senior, the sixth London Pharmacopœia (1788) is a work of considerable advancement. It was he who demanded the deletion of the remaining Antidotaria, the removal of redundant ingredients in many formulas and the consideration of compatibility in those ingredients remaining. Linnaeus had published his Species Plantarum in 1753, and the vegetable simples are here named according to his binomial nomenclature, though the Edinburgh Pharmacopœia of 1774 was the first British issue to do so. In this 1788 work we have a return to clarity and simplicity such as was visualised for the earliest issue of May 1618.

* The only existing copies are in the libraries of the Wellcome Foundation, Philadelphia College of Pharmacy (each with proclamation); British Museum, without proclamation, and the Royal College of Physicians of London. The Pharmaceutical Society Library copy has been missing since the library returned to its Bloomsbury headquarters after the 1939-45 war.

* Translated as "moss grown on human skull" but more probably a *Penicillium* mould (shades of penicillin!).



1



2

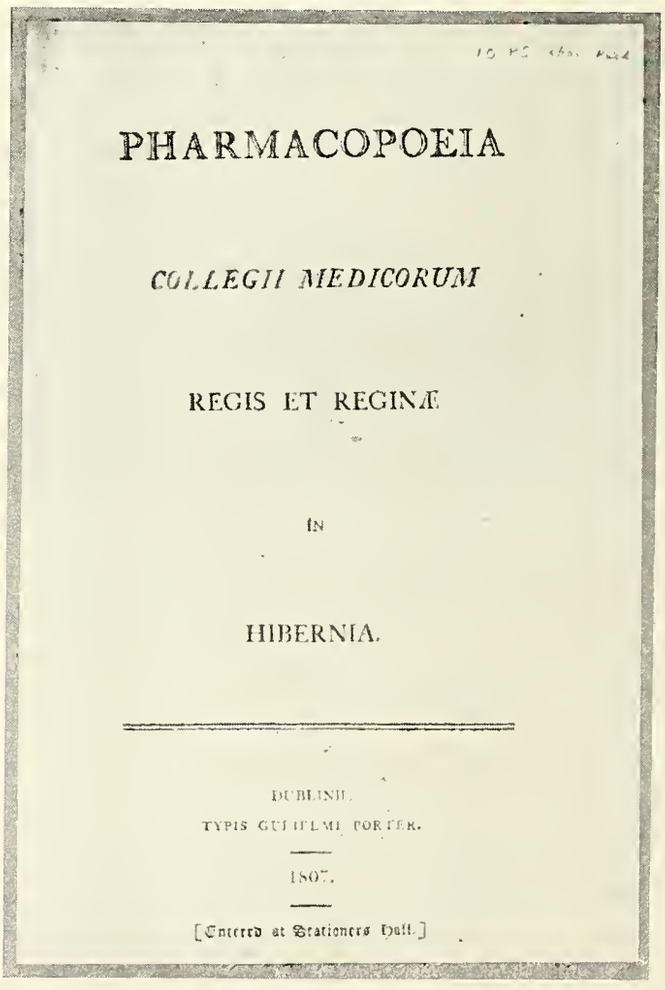
1. Title page, London Pharmacopoeia, May 7, 1618.

2. Title page, London Pharmacopoeia, December 7, 1618.



3

3. Title page, Pharmacopoeia of the Royal College of Physicians of Edinburgh, 1699. (By permission of the Royal College of Physicians, Edinburgh).



4

4. Title page, Pharmacopoeia of the College of Physicians of the King & Queen in Ireland, 1807.

The vegetable and animal drug names having now been modernised, it was the turn of the chemical substances to receive attention in the next issue, the seventh London Pharmacopœia (1809). Thus, for example, the former Natron vitriolatum becomes Sodae Sulphas. The variable "drop" is relaced by the more accurate minim, here introduced and defined. Richard Phillips, a pharmacist practising in Poultry, published his observations on this issue in 1811, severely criticising seventy-three preparations—especially liquor arsenicalis, in which an error occurred. His criticisms were investigated, found to be justified, and resulted in the "Editio Altera" in 1815. Pharmaceutical knowledge and experience were at last acknowledged.

The eighth London Pharmacopœia, published in 1824, was ill-timed, for it corresponded with a major upheaval in the College—the building of and removal to new premises in Pall Mall East. The issue would be considered a revision except for a new Order in Council (the criterion of any new pharmacopœia). By 1836, when the ninth Pharmacopœia appeared, considerable advances had been made; moreover, its preparation involved a break with tradition, for the pharmacist Phillips was invited to investigate and suggest improvements in its compilation. Innovations are the belated inclusion of a number of alkaloids and of tests for impurities. It was so far ahead of its time that little advance was possible by 1851, when the tenth and last London Pharmacopœia was issued.

The ten London Pharmacopœias thus extend over two-and-a-half centuries from early Stuart to mid-Victorian times, a wider range than any other British series. They advance from the dogma of ancient medical philosophy, through the acknowledgment of experiment, to the era of the early synthetic drugs and of scientific quality determination.

EDINBURGH PHARMACOPOEIAS

The London Pharmacopœias were obligatory only in England and Wales and in the town of Berwick-on-Tweed. Scotttish physicians first attempted to found a College in 1617 but did not achieve their objective until 1681, though a physic garden had been established in 1670. The earliest pharmacopœia for Scotland, the Edinburgh Pharmacopœia, was issued in 1699. It is a minute volume, 11 x 5 x 1 cm., akin to the 1651 London Pharmacopœia in size and format. As it appears to have been issued to few other than College members, it is now a rare work. The library of the Royal College of Physicians of Edinburgh owns one fair and one poor copies, the Bodleian Library has one, and a fourth is buried beneath the foundation stone of an Edinburgh insurance company. They are the only copies known to be in existence. The title "Pharmacopœa Collegii Regii Medicorum Edimburgensium" (sic) was retained throughout the series except for minor spelling changes. It was dedicated to William the Second (William of Orange or William III in England). The first 157 pages deal with Simples and Compounds, the remainder (fifty-one pages) with Chemical Preparations. Unsavoury items such as mummy are included, but an example of seventeenth-century purity-control is of interest—"skull of a man who died a violent death," i.e., of one who died in good health—probably hanged—rather than of disease. The second Edinburgh Pharmacopœia (1722) closely follows the fourth London Pharmacopœia published one year earlier, both in content and arrangement of sections. The Edinburgh issues are referred to as editions in their imprimatura, but are here named new pharmacopœias for conformity and for distinguishing revisions (normally called editions). Even when the third Edinburgh Pharmacopœia was issued in 1735 there were only thirty Fellows of the College in all, five of whom were honorary. The Pharmacopœia retains many unsavoury animal simples and some relics of ancient medicine, for example, the Treacle of Andromachus, with its sixty-five ingredients, thirteen of which have alternatives. Was it appreciated that this permitted over 8,000 versions of the preparation? In the fourth Edinburgh Pharmacopœia (1744) according to its Lectori, "we have added little and left the greater part undisturbed." Much the same applies to the fifth Edinburgh Pharmacopœia issued in 1756, but the sixth issue of 1774 reflects the great advances of the time. It is the earliest of our Pharmacopœias to indicate exact species for its vegetable drugs: the old pharmaceutic name is given, followed by a description of the species and a reference to Linnaeus' Species Plantarum. Nevertheless, of 180 items, sixty-nine are from unidentified plants. The system of nomenclature proved unsatisfactory, and a compromise between pharmaceutic and botanical names was adopted in the next issue, the seventh, in 1783: in it only four vegetable drugs remain unidentified.

Regular appearance at nine-year intervals had been achieved from the sixth issue, the ninth appearing promptly in 1792. A novelty in this issue is a list of Simples and Preparations "which are not themselves prepared in the pharmacy but which ought always to be available in the shops." There are also two cross-reference indexes of Nomina vulgares and Nomina propria—an obvious effort to encourage the use of scientific names.

There has long been confusion about the ninth Edinburgh Pharmacopœia. There is an issue dated 1803 in quarto and octavo formats and one dated 1804 in octavo and duodecimo formats. The latter has been cited as a new pharmacopœia because of its new imprimatur, but it is merely an edition, as proven by the 1817 issue proclaiming itself the tenth in the preface. The ninth includes tables of quantities of potent substances in various preparations—a wise step, for it had not yet become customary to indicate doses. No major changes occur in the tenth issue, 1817, but the eleventh, issued in 1839, is the first British pharmacopœia to be published in the vernacular, a change occasioned by the slow sale of its predecessor in Latin and the popularity of unauthorised translations. Elementary tests for purity appear for the first time.

The twelfth and last Edinburgh Pharmacopœia (1841) was produced for the mundane reason "that one first English Pharmacopœia . . . has been already disposed of." In spite of the slight changes, it is nominated twelfth edition in the preface and, for the sake of consistency with London Pharmacopœias, the word edition in the Scottish series has been accounted a new issue.

DUBLIN PHARMACOPOEIAS

It was not until 1761 that the Irish House of Parliament enacted that the King's and Queen's College of Physicians of Ireland should be empowered "to frame and publish a code or pharmacopœia" to be observed by all dispensers throughout the kingdom. Provisional texts appeared in 1794 and 1805, and the definitive issue in 1807. As this first Irish Pharmacopœia appeared almost two centuries after the first London issue, early representation of Irish medicine and pharmacy is wanting. There are but three issues (and a supplement) extending over a mere half-century.

The first issue is remarkably free from ambiguity, largely because of its freedom from synonyms. It follows closely the lines of the then current sixth London Pharmacopœia of 1788.

The second issue, 1826, is more extensive, particularly in its materia medica, but in no issue is an exclusively Irish plant included.

The third Dublin Pharmacopœia, 1850, resulted from three years of strenuous preparation. It was retrogressive in that chemicals were grouped according to their acid radicles and Linnaean nomenclature was replaced by that of Lindley's insignificant Oeconomic Botany. These disadvantages, however, were far outweighed by the system of weights and measures used, the merit of which was such that it was adopted for the first British Pharmacopœia in spite of its marked difference from the London and Edinburgh systems. It is, moreover, substantially the system still in use.

The sixteen-page supplement of 1850 differs from all others in that it is solely concerned with the nature of containers and does not call for any alteration, addition or deletion in the Pharmacopœia.

FIRST BRITISH PHARMACOPOEIAS

The Medical Act of 1858 was designed to effect a co-ordination of the medical profession throughout the British Isles. The body now known as the General Medical Council was called into being and one of its functions was the preparation of a uniform pharmacopœia. Considerable tact and judgment were called for in amalgamating three pharmacopœias, each established in its own country. Yet in spite of the tremendous effort and forbearance of its compilers, the first British Pharmacopœia, published in 1864, was a major disaster. This was more because of its omissions than of its contents. Neither the strengths nor the doses of preparations were included. The omission was dangerous in that any formula accepted for the new Pharmacopœia—whether of English, Scottish or Irish derivation—would almost inevitably differ in strength* from that established in the other two countries. Furthermore, indication of change in strength or dosage was not presented in the text.

There was consequently a great tendency to reject the new issue and to revert to the old College pharmacopœias. The tendency was circumvented by urgent revision and the issue of a second B.P. in 1867, in which were indicated the differences in strengths and doses between the new formulas and those superseded. General acceptance of the 1867 issue thus firmly established the British Pharmacopœia, the current issue of which, published in 1958, is the ninth of the series.

* Spirit of juniper, B.P., was ninety-five times stronger than that of the London preparation; spirit of peppermint forty-seven times; and spirit of rosemary sixty-four times. Tincture of iron perchloride, B.P., was one-quarter the Dublin strength.

TABLE I
PHARMACOPŒIAS OF THE BRITISH ISLES

Issue	London	Edinburgh	Dublin	British
I	1618 May	1699	1807	1864
Ia	1618 Dec.			
II	1650	1722	1826	1867
III	1677	1735	1850	1885
IV	1721	1744		1898
V	1746	1756		1914
VI	1788	1774		1932
VII	1809	1783		1948
VIII	1824	1792		1953
IX	1836	1803		1958
X	1851	1817		
XI		1839		
XII		1841		

THE KAISER FOUNDATION AND HOW IT OPERATES

MARGARET McCLELLAND, a Northern Ireland pharmacist formerly employed by the Foundation

THE wholesale and manufacturing department of the Kaiser Group of Hospital Pharmacies and Clinics in the Bay Area of San Francisco, California, U.S.A., operates under the name Dapite, Inc.

The Kaiser Foundation Hospital in Vallejo, where Dapite is situated, has a rehabilitation centre at which is operated a specialised technique perfected by Dr. Mead and Miss Knott (chief physiotherapist). Dapite, Inc., has, in the past, employed many disabled people from the Centre as part of its rehabilitation scheme. At the time of writing two such workers, victims of mining accidents, repackage drugs and two polio victims are on the office staff. Products manufactured by Dapite include *x*-ray solutions, pharmaceutical solutions, lotions, mixtures, ointments, eye preparations and disinfectants. Much of the work comprising repackaging of drugs in smaller quantities. For example tab. phenobarb., gr. ½, may be bought in 500,000 quantities and weighed or automatically counted into 25's, 50's and 125's. Each batch is given a control number (stamped on each label by the office staff) with details of the manufacturer's control number, expiry date, and any other necessary details for future reference. Vitamin preparations, cough mixtures, sedatives, antacids and many tablets, proprietary and non-proprietary, are similarly packed.

Each of those items would be given a prescription number, which is listed in a stock book. The item required by the pharmacy of the hospital is then ordered by the prescription number, of which there are about 545 in all

While I was at Dapite two young assistants carried out the heavier and " bulk " work—for example running alcohol from 40-gall. drums into 1-gall. containers. Disinfectants, *x*-ray solutions, dextrose solutions, were put up similarly. Orders were mailed in each morning by the various pharmacies or recorded on the telephone. Our day started at 7.30 a.m. when a hospital truck collected the orders and delivered them, providing a reasonably fast service within the 40-mile radius from Vallejo. The trend towards proprietary drugs I found even more marked in California than in Ireland.

Dapite was managed by one qualified pharmacist, and an assistant—me, for eight months! My work was generally to supervise and plan the repackaging of pharmaceuticals and bulk solutions and to check completed orders, which were put up by one assistant. I also saw to the orders for hypnotic drugs, extemporaneous packing items not under a prescription number, checking the incoming goods and making out daily orders to replenish stocks. Those were sent in to the Central Offices in Oakland, where the purchasing officer for all the hospitals sent them to the appropriate suppliers, who gave, I thought, a very good service. Most of the larger firms had depôts in or near San Francisco.

Although the Dapite premises were small, they had a turnover of over $1 million in 1960.

The Kaiser Health Plan is a non-profit-making medical service plan affiliated to the Kaiser Foundation Hospitals and medical centres, and served by doctors representing the major specialities. In addition to the eighteen centres in the Bay area, there are main centres in Los Angeles, San Pedro, Fontana, Portland, Vancouver (Washington) and recently in Honolulu, Hawaii.

Medical care is provided not only for serious illness but also for the prevention of disease. A person eligible for membership may subscribe for himself, his wife and his unmarried, dependent children under nineteen. Above that age, or upon marriage, the person applies for separate membership. Ambulance service is provided within thirty miles. The table indicates costs to the user.

	FOR SUBSCRIBERS	FOR DEPENDENTS
DOCTORS' OFFICE VISITS	$1 charge per visit	$1 charge per visit
Laboratory tests, *x*-ray, *x*-ray therapy	No charge	Health Plan rates
Casts and dressings	No charge	No charge
Physical Therapy	$1 per treatment	Health Plan rates
Drugs, medicines, injections, allergy tests	Provided at reasonable rates	Provided at reasonable rates
IN THE HOSPITAL:		
Physician's and surgeon's services, including operations	No charge	No charge
Room and board: General nursing, dressings: casts	111 days for each illness each year at no charge	60 days for each illness each year at no charge
X-ray, *x*-ray therapy, laboratory tests, physical therapy	No charge	Health Plan rates
Blood transfusions, if blood is replaced	No charge	No charge
Maternity care, pre-natal and confinement	$60 if confinement is due after ten months' membership, £140 before ten months	

Prevailing rates are those generally prevailing in the San Francisco Bay area for hospital, medical and related services.

Health plan rates are generally 50 per cent. of prevailing rates.

Important facts about family planning

For many years Family Planning has been an accepted practice in the modern world, and today all chemists carry a full range of contraceptives to meet every individual need.

* * * *

The name Rendell, and the famous product in the familiar red box, has been known throughout the world for over seventy years; although this pack has not been changed, having gained the confidence of millions of users, the formula and the method of manufacture has kept abreast with increased scientific research into the field of chemical contraception.

As a result, today Rendells Pessaries have gained the reputation of being the most convenient method, and the safest; especially when there is objection to the use of a diaphragm or other mechanical device, as a double precaution.

* * * *

Medical research has also shown that Rendells are NOW non-greasy in use, perfectly harmless, and cause no irritation or other side-effects.

Rendells Pessaries have also passed the agreed tests, as required and carried out by the International Planned Parenthood Federation.

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FERSAMAL SYRUP

does the disappearing trick every time





FERSAMAL SYRUP is specially prepared to appeal to infants and children. For them it has a flavour and colour quite untypical of iron tonics. For you it will also do the disappearing trick—from your counters, just as fast as you can display it. Like the tablets, Fersamal Syrup contains ferrous fumarate, has a high iron content and is exceptionally well tolerated.

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Trade Price 42/- per doz.

the iron tonic with the juicy-fruity taste

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Subsidiary Companies or Agents in most countries

CHIPPINGS AND DROPLETS

Paragraphs and excerpts from early issues of the *C. & D.*

TOOTH-ACHE PENCIL

THE tooth-ache pencil introduced by Messrs. Bourne & Taylor deserves a word of comment for the very attractive style in which it is introduced. The pencils contain some tooth-ache elixir, and present a method of ready application. They are made of coloured glass, and, a dozen mounted on a card, surrounding a very effective photograph, are most certain to attract attention.—*April 15, 1874.*

SILICATED CARBON FILTERING TAP

THIS useful invention is intended for purifying water as it flows from an ordinary cistern or water-butt. The filtering tap is especially recommended to the proprietors of small tenements in poor localities, where, in many cases, several families derive their supply from the same receptacle, and where the water used for drinking and cooking is liable to every kind of contamination. The filtering medium is placed in the front part of the tap which, for convenience, is made to unscrew. In order to clean the filtering-tap (which may be done without emptying the butt) it is only necessary to unscrew the front part and blow strongly through it. By this means all the impurities are brought to the surface of the filtering medium, and may be washed off before replacing the tap.—*January 15, 1868.*

LATENT PHOTOGRAPHS

WE can remember the time when experimental chemistry was doomed to " blush unseen " in the back kitchen, " and waste its sweetness on the desert air " of an outhouse. Now, however, it flourishes in the drawing-room, producing Pharaoh's serpents, oxide of chromium tea, oleate of sodium soap bubbles, and many other wonderful things. Photography has lately been joined to drawing-room magic. You take two pieces of blank paper, and, after wetting one with water, you press it upon the other. The result of this simple operation is the magical development of a photographic picture. Mr. C. Jabez Hughes has just introduced a latent photograph that is developed into a coloured picture, by dipping it in water in which a little pinch of powder has been dissolved. The pictures we have examined are of a beautiful blue colour. The powder we used appeared to be ferricyanide of potassium.—*May 15, 1866.*

PERSISTENT BUBBLES

M. PLATEAU, some time ago, invented a solution which forms bubbles of great beauty, and strong enough to remain for hours without bursting, when shielded from draughts. The solution is prepared from pure oleate of soda, glycerine, and distilled water, and can now be obtained from Mr. W. Ladd, the well-known philosophical-instrument maker. The bubbles may be blown with a clean tobacco-pipe; but for a few shillings Mr. Ladd supplies a more suitable glass instrument, a wire ring for supporting the bubbles, india-rubber tubing for inflating bubbles with gas, and a glass capsule for holding the solution. In the *Intellectual Observer* for December last, Mr. John Broughton describes a variety of beautiful experiments which may be readily performed with these fairy-like globes.—*February 15, 1866.*

MAGIC INKSTANDS

THE extraordinary success which has attended the introduction of the Inexhaustible Magic Inkstands in this country testifies that these are not merely interesting toys. There is no doubt that by simply following the directions clean water may in these inkstands be transmuted into ink of very good quality, and that the process may be repeated to such an extent that to persons not much afflicted with the *cacoethes scribendi* a single inkstand will last for a lifetime. Messrs. Sampson Low & Co., of Fleet Street, who are the agents for Great Britain, have lately issued an illustrated list showing the various styles of inkstands they supply, at prices varying from 9d. to 30s. We should also add that copying ink in the same " magic " form has lately been added to the collection.—*December 15, 1874.*

A CURE FOR A COLD

DR. DAVID FERRIER describes in a recent number of the *Lancet* a method of curing an incipient cold, which he first tried on himself, and afterwards on others, with almost magically curative results. Finding a severe cold coming on one evening indicated by weight in the frontal sinuses, tickling of the nostrils, sneezing, watering of the eyes, and commencing flow of the nasal mucus, the doctor bethought himself of the usually excellent effects of bismuth in cases of acute catarrh of the gastric mucous membrane, which seemed to him to correspond with the acute nasal catarrh. He therefore proceeded to " snuff " trisnitrate of bismuth freely, and next morning all trace of the threatened disorder had vanished.—*May 15, 1876.*

TRAVELLER'S JOY

By Viper's Bugloss



(A thrusting, climbing plant)



(Erect and Bristly)



An ordinary Chemist such as I
From travellers must often buy;
But what a trial they can be,
At least, they mostly are to me!
So these few lines I now append,
Pray read them through right to the end,
Attempting somehow to portray
A few that I may see today.

THE OAF

HE opens wide the pharm'cy door,
Steps in and struts upon the floor.
His hat upon his head he keeps,
And into action quickly leaps.
(Of pharmacy he knoweth nought,
Nor e'en of manners what he ought.)

N

How very smug he seems to be,
And wrapped in self-complacency.
He quickly tells me what I need!
But to his words I pay no heed.
For reps like him I have no time,
And on his goods spend not a dime.

So it's "No thank you, not today."
I quickly speed him on his way.

THE BORE

WHO next upon the scene appears
Has called on me for years and years.
Yet never does he seem to know
How much he bores me, oh dear no!
It's true from him I always buy,
But *he* is not the reason why.
Their names are household words, and so
Upon my shelves his goods must go.



At his own jokes he laughs too long,
And never sees that he is wrong.
He fails completely to perceive
How glad I am for him to leave.

His calls are fairly frequent, too.
What is a pharmacist to do?

THE DRIP

THE tall thin lad who comes in now
Is diff'rent from the other two;
He represents a "chemist" house,
His manner's quiet, like a mouse!
He is not free from fault, however,
For like the brook, he babbles ever.



His voice, monotonous and strong,
Goes on and on and on and on.
E'en an order doesn't seem
To dam the flow of words in stream.
How difficult to make him go,
That I'm fed up, he doesn't know.

He is not rude, or boorish, no,
It's simply that he will not go!



THE BALLOON

A LARGE, important looking man
Doth me and all my works now scan;
Tends to ignore whate'er is said,
And o'er the shop himself doth spread.
His Homburg hat upon a chair,
(Observe that crinkly, shiny hair!)
His brief-case on the baby-scale,
And thence produces sheaves of "mail."
" Not needing anything today?"
[Vast and incredulous dismay!]
" Not needing anything from ME?
Whatever can the matter be?"

The balloon is pricked, the bubble's burst.
Aha, the chemist's done his worst!

THE SALESMAN

THE high-pressure man's next on the list,
How very little he'd be missed!
With tooth-paste, shampoos and the rest;
Oh what a burden, what a pest!



If a dozen cases you should need,
For you to buy still more he'll plead,
With talk of extra 5 per cent;
You pray for patience to be lent!
His interest solely seems to be
To build your stock as high can be.
That it will last six months or more—
Alas, he's int'rested no more.

Oh what a plague such fellows are,
There really ought to be a bar!

THE BEGGAR

A QUIET and inoffensive chap
Will call upon me next, perhap;
His speech is soft, his voice is low,
He's hardly in, but he's ready to go!
With apologetic manner, he
Spins such a sad, sad tale to me.
The goods he carries are not well-known,
The poor chap's begging for a bone!
Oh hard the heart that can withstand
The plaintive tale, the forlorn stand,
And if I am not careful, I
Shall rue the day he begged me buy.



In future I must wary be,
Of reps who come and BEG *from me!*

THE GENTLEMAN

THE courteous gent who next doth call
Is to my mind the best of all,
For such his charm and friendliness
That he's a rep you'd scarcely guess!
And eye to eye we often see
On things that interest him—and me!



We yarn about both this and that;
I don't keep him upon the mat!
He has the sense to understand
That all my buying may be planned;
And if I don't intend to buy,
It is not his to argue why.
HOW NICE IF ALL REPS WERE LIKE HIM!
OR IS THIS JUST A CHEMIST'S WHIM?

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN

COUNCIL MEETS IN NEW CHAMBER

New members take their places

ALMOST exactly 120 years after the foundation of the Pharmaceutical Society the Council held its first public session in the new Council chamber on June 7, following the extensive alterations to the Society's house. The new chamber is wholly within No. 17 Bloomsbury Square, the actual first headquarters, later added to. MR. T. REID said the Council was indebted to the chairman and Executive of the National Pharmaceutical Union for placing their premises at the disposal of the Council during the past six months. He then welcomed back the members of Council who were successful in the recent election and added a warm welcome to the three new members: Messrs. H. Jarvis Graves, who returned to the Council after an interval of one year; Herbert Williams and Patrick Flood.

Mr. Reid later proposed Mr. H. Grainger as *President* for the year (see *C. & D.*, June 10, p. 587). MR. E. A. BROCKLEHURST proposed that Miss Mary Burr should be elected *Vice-president*, MR. H. STEINMAN nominated Mr. W. S. Howells as *Treasurer*. Sir Hugh Linstead and Mr. F. W. Adams were re-elected *Secretaries*.

Praise for the Branches

Although it was too early to assess the results of efforts by pharmacists during the Commonwealth Technical Training Week, 285 sets of posters had been distributed and 92,500 copies of the "give-away" careers leaflet had been issued. It was further reported that a letter had been received from Boots Pure Drug Co., Ltd., congratulating the Society on the posters and literature and submitting a cheque for £200 as a contribution to the expenses incurred by the Society in producing them. It was recommended and agreed by the Council to send letters of thanks (a) to the Branches for their work in connection with the Week, and that their comments on the display material and careers literature distributed should be invited; and (b) to Messrs. Boots for their contribution. In connection with the proposed distribution of copies of the Careers booklet to all secondary grammar schools, it was reported that the Central Youth Employment Executive of the Ministry of Labour had offered to undertake the distribution of the booklet without charge. Distribution would be made to local youth employment offices and thence to secondary grammar schools. By that means a copy of the booklet would be sent to every youth employment officer and every school in Great Britain that was providing instruction to the standard required by the Society. For such a distribution 4,700 copies of the booklet would be needed, and it was recommended and agreed by the Council that the offer of the Central Youth Employment Executive should be accepted with thanks, and the necessary copies sent to them for distribution.

The Education Committee discussed the tape-recorded lecture on tranquillisers prepared by Dr. G. R. Boyes and approved the suggestions made by Dr. Capper for future progress in the preparation of similar material and the suggestion that the first lecture should be sent to selected Branches for comment. The Committee reported on its consideration of a memorandum submitted by Professor Andrew Wilson regarding the recently established University of Liverpool B.Sc. honours degree in pharmacology. It was decided to approve the degree for the purpose of Regulation 7 of the Regulations for the Pharmaceutical Chemist Qualifying examination.

The annual reports of the boards of examiners for England and Wales and for Scotland, 1960, were received and it was agreed to publish them and circulate them to schools of pharmacy. The Council received a report on the further alterations in the Society's House in progress or to be made. It was recommended and agreed by the Council that an estimate submitted by the Victoria Joinery Company for the supply of showcases in teak and satin chrome for two of the new exhibition rooms, at a cost of £3,827, should be accepted.

It was reported that a party of thirty-five pharmacists from California, under the sponsorship of the school of pharmacy of the University of the Pacific, would be visiting Britain, June 21-25, and Council agreed that the party should be entertained in the Society's house on the evening of June 22.

It was reported that a saving of approximately £750 had been effected because approximately 60 per cent. of members had not demanded receipts when paying their retention fees for 1961, and it was decided to consider the position at the next meeting.

It was recommended, and the Council agreed, that, to meet increasing production costs, the annual subscription rates of the *Journal of Pharmacy and Pharmacology* should be increased from January 1962 to £2 15s. for members and to £5 for non-members, a single copy in each case to be 10s.

The Publications Committee reiterated the views expressed by the president when the motion given below was moved at the Branch Representatives' meeting, and it was decided to inform the N.P.U. of the resolution and invite it to provide the Society's journal with as full information as possible of its activities:

> "That it is the opinion of this meeting that The Pharmaceutical Journal should devote a larger space to publication of National Pharmaceutical Union news, correspondence and information bearing in mind the origin of the National Pharmaceutical Union."

An invitation was reported received from the General Medical Council for the Pharmaceutical Press to publish the British Pharmacopœia, 1963, on behalf of the General Medical Council. On the recommendation of the Committee the invitation was accepted.

The Law Committee reported that, during April, the Society's inspectors had visited the premises of 1,394 authorised sellers "A" and "B," twenty-four listed sellers, and sixty-three drug-store proprietors. During the same month agents had visited 575 drug stores and grocers' and similar traders' premises. Fifteen cases of alleged infringement of the Pharmacy Acts had been considered and appropriate action taken.

Liaison with National Pharmaceutical Union

A report was given on the present position of correspondence between the Society and the Ministry of Health, concerning the National Health Service prescription charge, and it was agreed to approach the National Pharmaceutical Union before further action was taken.

Applications were considered for designation as fellows from two members and it was recommended and agreed by the Council that George Frederick Edwards and Dennis Corden be designated as fellows under this by-law.

GRUBBY NOTICES: "Complaints in our correspondence columns over difficulties in getting emergency prescriptions from chemists in the Bristol area seem to spotlight the need for better information of the services available. A chemist is required when his shop is closed to exhibit a notice giving the names and addresses of colleagues in the area who can offer an emergency service. But so often these notices have been up for so long that they have become faded and dirty so that it is almost impossible to read the names of available chemists. We suggest that the notices should be reviewed frequently and be more informative and that they may be lit up at night."—Commentary in the *Bristol Evening Post* recently.

TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, JUNE 21: A relatively inactive week in the CRUDE DRUGS market. Among AROMATIC SEEDS a firmer tone was noticeable in CELERY at 162s. 6d. spot and 167s. 6d. per cwt., c.i.f. Shipment quotations for MOROCCAN CORIANDER eased to around 115s. per cwt. and there was a similar trend in Moroccan FENUGREEK.

A report from Grenada indicates that little interest was being taken in sound NUTMEGS and MACE even at reduced prices. There was some interest being shown in defective nutmegs, but supplies of this grade continue to be low. Harvestings continue to show sharp increases and the crop appears to be heavy in certain areas. Accounts of the Grenada Co-operative Nutmeg Association for the half-year ended December 31, 1960, show a net trading surplus of W.I.$509,681 compared with $842,165 for the corresponding half year in 1959. The decrease is attributed to both smaller sales and lower prices.

In ESSENTIAL OILS the position of LEMONGRASS was unchanged but GERANIUM continued to fall, Bourbon being quoted 95s. to 100s. per lb. on the spot whilst Algerian was 95s. to 105s.

The prices of certain MAGNESIUM SALTS were raised during the week by one manufacturer and it is thought likely that others may follow later. The heavy CARBONATE is 10s. per cwt. dearer; the SULPHATE B.P., 1s. 9d.; and the dried SULPHATE, 2s. 6d.

Shipments of Tinnevelly SENNA from the port of Tuticorin during May were as follows:—

	U.K.	U.S.	EUROPE
SENNA	tons	tons	tons
PODS	—	—	—
LEAVES	3	13	10

Pharmaceutical Chemicals

EMETINE. — One-kilo lots. HYDROCHLORIDE, 8,642s. per kilo.

ERGOMETRINE.—MALEATE, B.P., 270s. per gm.

ROCHELLE SALT.—Powder or granulated, 5-cwt. lots or over in kegs, 220s. per cwt.; 1-cwt. 222s. 6d. (bags less 5s.).

SACCHARIN.—B.P.C. powder. One lb. and over, 99s. 10d. per lb.; SODIUM SALT, 80s. 10d. per lb. Prices include duty and carriage.

SALOL.—B.P.C., 9s. per lb. (1-cwt. lots).

MAGNESIUM CARBONATE. — Per cwt. LIGHT, 129s. or 121s. for 1-ton lots; HEAVY, 175s. for 1-cwt. lots; from 130s. to 135s. for 1-ton lots.

MAGNESIUM SULPHATE. — B.P. in minimum 1-ton lots varies between £19 5s. and £25 per ton according to size of crystal and manufacturer. Exsiccated, £52 per ton. All ex works.

MERCURY DERIVATIVES.—Current quotations (per kilo) for less than 50-kilo lots are:—AMMONIATED, B.P. lump or powder, 55s. 6d.; PERCHLORIDE, B.P., powder, 48s.; SUBCHLORIDE (calomel), B.P., 54s. 6d.; OXIDES, yellow, B.P., 57s. 3d.; red, B.P.C. 1949, 58s. 6d.

OXALIC ACID.—Manufacturers' rates for 1-ton lots £128 10s. per ton, delivered in free kegs.

QUINIDINE. — 1,000-oz. lots:—ALKALOID, 3s. 8½d. per oz.; SULPHATE, B.P., 1932, 2s. 5d.; SULPHATE, B.P., 1958, 2s. 8½d.; BISULPHATE, 2s. 5½d.; DIHYDROCHLORIDE, 3s. 5d.; HYDROCHLORIDE, 3s. 1½d.; ETHYL CARBONATE, 4s. 1½d.; HYDROBROMIDE, 3s. Quantities under 100 oz. plus threepence.

TARTARIC ACID.—(In kegs) 1-ton lots, 298s. per cwt.; 10–19 cwt., 300s.; 5–9 cwt., 302s.; 1–4 cwt., 304s. Bags 8s. cwt. less. Crystals 7s. cwt. more than powder and granular.

TEREBENE. — B.P.C., one-carboy lots, 4s. 5d. per lb.

TERPIN HYDRATE.—From 6s. per lb. upwards as to quantity.

UREA.—Pharmaceutical grade, £59 15s. per ton in 1-cwt. bags non-returnable; technical quality, £41 5s. per ton (4-ton lots).

Crude Drugs

ACONITE. — Spot: Spanish *napellus*, 2s. 6d. per lb.

CASSIA. — *Fistula*, 105s. per cwt.; *lignea* (whole), spot 420s., duty paid.

CHAMOMILE.—Belgian, 6s. 6d. to 7s. 6d. per lb. as to quality; Hungarian type, 6s. 6d.

CHERRY BARK. — Thin natural, 2s. per lb.

CHILLIES. — Nigerian, 185s. per cwt. Mombasa, 350s.

CLOVES.—Zanzibar spot, 2s. 10d. per lb.; shipment, 2s. 7¼d., c.i.f.

COCHINEAL.—Black-brilliant, 11s. 6d. per lb., silver-grey 10s., spot; Peruvian silver-grey, 4s. 6d.

COCILLANA. — Bark, 2s. per lb., spot; 1s. 8d., c.i.f.

COLOCYNTH PULP.—Spot, 2s. to 2s. 6d. per lb. as to quality.

LIQUORICE. — Natural root: Persian on the spot, 40s. per cwt.; Anatolian, 60s. Block juice: Anatolian from 190s. per cwt.; Italian stick from 392s. to 470s. per cwt.

LYCOPODIUM.—Indian 15s. per lb., spot. Russian not quoted.

NUTMEGS. — West Indian 80's 12s. per lb., spot: sound unassorted, 8s. 9d.; defectives, 6s. 6d.

PEPPER. — White Sarawak, spot, 3s. 9d. per lb.; shipment, 3s. 8½d., c.i.f. Black Sarawak, spot, 3s. 3½d.; shipment, 3s. 1½d., c.i.f. Black Malabar, 400s. per cwt. spot, and 400s., c.i.f.

PODOPHYLLUM.—*Emodi* nominal; *Peltatum*, 435s. per cwt.

PYRETHRUM.—Extract, minimum 25 per cent. w/w pyrethrins, 75s. per lb. for small lots.

SEEDS. — (Per cwt.). ANISE. — Cyprian, 200s., spot. CARAWAY.—Dutch quoted 140s., duty paid. CELERY.—Indian firmer 162s. 6d. spot, 167s. 6d., c.i.f. CORIANDER. —Moroccan are in short supply with 130s. quoted nominally duty paid; shipment, 115s., c.i.f., quoted; Indian, 115s., spot; shipment, 88s. 6d., c.i.f. CUMIN.—Indian, 175s. spot; Iranian, 165s. duty paid. DILL. —Indian, 100s. spot; shipment, 87s. 6d., c.i.f. FENNEL.—Chinese, 105s., duty paid; Indian, 100s. to 105s., spot; FENUGREEK. —Moroccan 85s., shipment 76s. 6d. MUSTARD.—English 55s. to 85s., according to quality.

TONQUIN BEANS.—Para spot, 6s. 1½d. per lb. Shipment nominal. Angostura 11s.

TRAGACANTH. — No. 1 ribbon, £145 to £150 per cwt. No. 2, £135 to £140.

TURMERIC.—Madras finger on spot 120s. per cwt.; shipment up to 115s., c.i.f., now quoted.

WITCH HAZEL LEAVES.—New crop not yet offering.

Essential and Expressed Oils

ALMOND.—Moroccan, 66s. per lb., duty paid.

AMBER.—Rectified on the spot, 1s. 6d. per lb.

ANISE. — Chinese, 8s. per lb., spot; shipment, 7s. 10½d., c.i.f.

BAY.—West Indian short on the spot, prices nominal.

BERGAMOT.—Spot, from 72s. 6d. per lb.

BOIS DE ROSE.—Brazilian, 13s. 6d. per lb. on the spot and 12s. 6d., c.i.f.

CITRONELLA. — Ceylon, spot, 6s. 6d.; shipment, 6s. 1d. per lb., c.i.f. Formosan, spot, 6s. 9d., in bond; shipment, 6s. 6d., c.i.f.

EUCALYPTUS.—Spanish, 3s. to 3s. 6d. per lb. spot. Chinese, 3s. 3d., all duty paid.

GERANIUM.—Bourbon, 95s. to 100s. per lb. on the spot: Algerian, 95s. to 105s.

GRAPEFRUIT.—Florida, 18s. per lb.

JUNIPER. — B.P.C. 1949 oil is from 15s. per lb. on the spot. English-distilled, 150s. JUNIPER WOOD, from 5s.

LEMON. — Californian cold-pressed from 15s. 6d. per lb., spot; Sicilian, about 29s.

LEMONGRASS. — Spot, 17s. per lb. nominal; June shipment, 15s. 3d., July, 15s., c.i.f.

NUTMEG.—Imported B.P. oil is from 50s. to 90s. per lb. as to source. English-distilled, 140s.

OLIVE. — Spot, 19s. 3d. to 20s. 3d. per gall. in drums ex wharf; shipment, £190–£205 per 1,000 kilos, f.o.b. Spanish port.

PATCHOULI. — Penang is 40s., duty paid and 35s., c.i.f., per lb.

PENNYROYAL. — Spot is firm at 15s. per lb., duty paid.

PEPPERMINT. — *Arvensis:* Chinese spot, 38s.; shipment, 35s., c.i.f. Brazilian spot, 16s.; June–July shipment, 15s., c.i.f. *Piperita:* Italian, 48s. per lb., spot. American from 30s. to 38s. per lb. as to make.

PIMENTO. — English - distilled berry 167s. 6d. per lb.; imported, 80s. Rectified leaf, 27s. 6d. per lb. for small lots.

ROSEMARY.—Spanish is 7s. 6d. per lb. on the spot for best quality.

RUE.—Spanish is 25s. per lb. spot.

SAGE.—Spanish, 8s. per lb., Dalmatian, 23s.

SASSAFRAS.—Brazilian is from 3s. 6d. per lb., duty paid.

TANGERINE.—From 33s. per lb. as to quality.

VETIVERT. — Bourbon spot, 110s. to 112s. 6d. per lb.; shipment, 108s., c.i.f.

UNITED STATES REPORT

NEW YORK, JUNE 20: Lower per lb. among CRUDE DRUGS were WITCHHAZEL LEAVES at 35 cents, down 20 cents; MANDRAKE ROOT at 42 cents, down six cents; BLOODROOT at 80 cents, down ten cents; and CASCARA BARK at 28 cents, down four cents. Among ESSENTIAL OILS GRAPEFRUIT OIL declined by 15 cents to $2·65 a lb. while Bourbon GERANIUM OIL dropped to $16·25.

TELEVISION

Figures in the columns represent number of appearances of the product during the week.

July 2—8	London	Midland	North	Scotland	Wales	South	N.E.	Anglia	Ulster	Westward
1-2 Spray ..	—	—	—	—	—	4	—	—	—	—
Aidex	1	1	1	1	1	1	1	—	1	1
Alka-Seltzer ..	6	10	9	6	6	5	2	3	6	2
Amami	3	5	4	5	—	—	4	4	4	—
Anadin	6	5	2	3	4	8	4	4	—	4
Andrex	—	—	3	—	3	—	—	3	3	3
Anne French ..	1	1	1	—	1	1	—	1	—	—
Askit powders ..	—	—	—	12	—	—	—	—	—	—
Bisodol	5	—	1	—	—	—	—	—	—	—
Body Mist ..	2	3	1	1	2	2	—	—	—	—
Bristow shampoo	2	1	2	3	3	3	1	3	—	2
Brylcreem ..	2	3	4	3	4	1	1	2	3	3
Coldrex	2	3	3	3	3	2	2	3	3	2
Cooper's aerosols	2	2	3	3	2	2	2	2	2	2
Delrosa	—	—	—	—	—	—	5	—	1	—
Delsey	—	3	2	—	—	—	—	—	—	—
Dispel disinfectant	—	—	—	2	—	—	—	—	—	—
Dorant mouth-wash	—	—	—	—	—	1	—	—	—	—
Dramal	1	2	2	4	3	2	2	3	2	2
Elliman's foot cream ..	1	1	1	—	—	—	—	—	—	—
Eno's fruit salt..	2	2	2	2	2	2	2	2	2	2
Euthymol ..	1	2	2	1	2	1	1	1	1	1
Ex-Lax	2	—	—	—	2	—	—	2	—	—
Freezone ..	—	—	2	—	—	—	1	—	—	—
Hiltone	2	—	3	4	—	—	3	—	—	—
Immac	2	3	1	2	1	2	—	2	2	1
Ingram shaving cream	4	4	3	4	4	4	3	4	5	—
Kleenex ..	2	1	1	3	2	2	2	1	2	2
Loxene shampoo	2	2	2	3	3	3	3	3	3	2
Macleans tooth-paste	3	2	8	7	7	8	—	6	6	3
Margo's hair lacquer ..	—	7	—	—	—	—	—	—	—	—
Milk of Magnesia tablets	1	—	—	4	4	4	3	3	—	—
Mum deodorant..	1	1	2	3	1	—	1	—	3	1
Nivea Creme ..	5	—	—	—	—	—	—	—	—	—
Nonocal 900 ..	7	—	—	—	—	7	—	—	—	—
Phillips tooth-paste	1	—	—	—	—	—	—	—	—	—
Poppet	—	—	—	—	2	—	—	—	—	—
Pretty Quick ..	—	—	—	5	—	—	—	—	—	—
Q-tips	—	—	—	—	—	3	—	—	—	—
Rinstead Pastilles	1	2	1	1	1	—	1	1	1	—
Saxin	4	4	4	4	4	4	4	4	4	4
Schick shavers ..	1	1	—	—	—	—	—	—	—	—
Sek	—	2	2	—	—	—	—	—	—	—
Silvikrin pure ..	2	1	3	5	2	4	2	4	5	4
hair cream..	2	3	2	4	2	4	1	1	3	3
Smokies	—	—	—	—	—	1	—	2	—	—
Span shampoo ..	5	—	—	—	—	6	—	—	—	—
Star spray ..	3	3	2	—	2	3	2	—	—	—
Winspray ..	4	2	—	—	1	3	—	4	—	2





FOR DISPLAY AND SALES: Display " dispensers " for counter use in selling Caress brush rollers and Prom conditioning home " perm," both products of Toni Co. (division of Gillette Industries, Ltd.).

PRINT AND PUBLICITY

PUBLICATIONS

Periodicals

HILGER & WATTS, LTD., 98 St. Pancras Way, London, N.W.1: *Hilger Journal*. Vol. 6, no. 3. June. Pp. 18.

ROCHE PRODUCTS, LTD., 15 Manchester Square, London, W.1: *The Roche Courier*. Vol. 27, no. 6. Pp. 4.

Catalogues

DUNCAN, FLOCKHART & CO., LTD., Edinburgh: List of pharmaceutical products, 1961-62. Pp. 20.

L. LIGHT & CO., LTD., Colnbrook, Bucks: List of organic chemicals, metals and other elements, 1961-62. Pp. 120.

PARKE, DAVIS & CO., Staines Road, Hounslow, Middlesex: Adroyd tablets, 5 mgm. Page for insertion in booklet of medical specialities.

SHERMAN CHEMICALS, LTD., Downham Mills, Chesnut Road, London, N.17: List of fine research and industrial chemicals. Pp. 129.

Booklets and Leaflets

BROOK MOTORS, LTD., Empress Works, Huddersfield, Yorks: " Which motor should you buy? " Pp. 16.

CRODA, LTD., Cowick Hall, Snaith, Goole, Yorks: " Crill S.8 " sorbital monostearate polyoxyethylene derivative. Pp. 5; " Croda User's Digest " new data on the use of Croda products in industry. Pp. 33.

PREMIER COLLOID MILLS, LTD., Hersham Trading Estate, Walton-on-Thames, Surrey: Premier portable mixers . . . laboratory mixer (model 1300), pilot mixer for up to 50 gallons (model 2300), pioneer mixer for 200-1,000 gallons (model 2600), universal mixer for up to 1,500 gallons (model 2100); Premier side-entry mixers (models 3400 and 3600); Premier " dispersator " for use with mixers. Leaflets available from makers on request.

PRESS ADVERTISING

DALMAS, LTD., Junior Street, Leicester. Mimosept. In women's magazines.

GOYA, LTD., Badminton Court, Amersham, Bucks: Goya beauty preparations. In leading women's magazines.

HORLICKS, LTD. (Dietetics division), Slough, Bucks: Nonocal 900. In London *Evening Standard*.

RECKITT & SONS, LTD., Sales Department, Hull, Yorks: Floret. In national Press, *Radio Times*.

THORNTON & ROSS, LTD., Linthwaite, Huddersfield: Zoflora disinfectant. In women's magazines.



"METHOD" EMPHASIS IN DISPLAY-PIECES: Three of five point - of - sale display aids produced by Lilia-White (Sales), Ltd., Bessemer Road, Welwyn Garden City, Herts, for their Golden Babe disposable napkins. Printed on ⅛-in. board they measure approximately 35 x 13 in., 19 x 20 in. and 24 x 12 in. respectively. The one at top right hangs. The other two stand.





COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Sunday, June 25

BIRMINGHAM PHARMACEUTICAL ASSOCIATION, Westbourne Road, Olton, at 2.15 p.m. Motor treasure hunt.

CHESTERFIELD BRANCH, PHARMACEUTICAL SOCIETY, Chesterfield Market Place, at 2 p.m. Half-day coach trip to Capesthorne Hall.

Tuesday, June 27

STOKE-ON-TRENT PHARMACEUTICAL COMMITTEE, North Stafford hotel, at 7.30 p.m. " Urgent N.H.S. Matters."

TEES-SIDE BRANCH, PHARMACEUTICAL SOCIETY, Queen's hotel, Bishopton Lane, Stockton-on-Tees, at 7.30 p.m. Joint meeting with Middlesbrough and Hartlepools Branches, N.P.U., Middlesbrough and West Hartlepool Pharmaceutical Committees. " N.H.S. Negotiations."

Wednesday, June 28

CROYDON BRANCH, PHARMACEUTICAL SOCIETY, Croydon car park, at 1.45 p.m. River trip—Windsor to Bourne End.

Thursday, June 29

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY, Buxton High Peak. Meeting. Kerfoot trophy and prize.

LEEDS PHARMACEUTICAL COMMITTEE, The People's Hall, Albion Streeet, Leeds, at 7.45 p.m. N.H.S. contractors' meeting. Address by Mr. T. Heseltine (a member of the Negotiating Committee).

WILLS

MR. C. J. ARMSTRONG, M.P.S., 9 De La Warr Road, East Grinstead, Sussex, left £9,011 (£6,098 net).

MR. J. H. BARNS, M.P.S., Harber, Stoke Fleming, Dartmouth, Devon, left £3,164 (£2,859 net).

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," June 14

For chemical products used in industry and science (1) *and for all goods* (3)

FLUROGARD, B812,989-90, by County Laboratories, Ltd., Brentford, Middlesex.

For non-medicated toilet preparations, cosmetic preparations and preparations for the hair (3)

CASTALIA, B808,588, by Hans Schwarzkopf, Hamburg-Altona, Germany.

For all goods (3)

IVAZIL, 809,069, by Ravensberg, G.m.b.H., Zurich 11/50, Switzerland. RENOIR, B815,321, by Ulter (Bradford), Ltd., Bradford, 6, Yorks. LUVIL, 815,591, by Lever Brothers, Port Sunlight, Ltd., Port Sunlight, Ches.

For preparations in tablet form for cleansing the teeth (3)

ORTABS, 812,770, by D. & W. Gibbs, Ltd., London, W.1.

For dental cleaning preparations and denifrices, all containing fluorine (3)

FLUORODENT, 813,038, by County Laboratories, Ltd., Brentford, Middlesex.

For shampoos and hair preparations (3)

ACCENT, B813,377, by Huntington Laboratories, Inc., Huntington, Indiana, U.S.A.

For soaps, perfumes, non-medicated toilet preparations, cosmetics, and preparations for cleaning the teeth and preparations for the hair (3)

PANORAMA, 815,671, by Boots Pure Drug Co., Ltd., Nottingham.

For detergents (3)

SKEF, 816,585, by Middleton Plastics, Ltd., Cheltenham, Glos.

For pharmaceutical preparations for sale in the United Kingdom (5)

MYCOSTETIN, 785,653, by E. R. Squibb & Sons, Ltd., London, W.1.

For preparations of vitamins and medicinal products, all combined with inert carriers (5)

MERCOTE, 798,879, by Merck & Co., Inc., Rahway, New Jersey, U.S.A.

For all goods (5)

SPRINT, 805,369, by D.D.D. Co., Ltd., Watford, Herts. REDIPLETE-M, 809,452, by Merck & Co., Inc., Rahway, New Jersey, U.S.A. PROBIOVIT, 812,028, by Istituto Farmacoterapico Italiano, S.p.A., Rome, Italy. SUXINUTIN, 812,275, by Parke, Davis & Co., Detroit, 32, Michigan, U.S.A., and Hounslow, Middlesex. MYOGESIC, 818,357, by Chas. Pfizer & Co., Inc., Brooklyn, New York, U.S.A. SCOTLETS, 817,858, by Scott & Bowne, Ltd., London, W.1. VOLPLAN, 818,396, by The British Drug Houses, Ltd., London, N.1. KATRIL, 818,784, PREDICAL, SEDRINAL, 818,789-90, by Boots Pure Drug Co., Ltd., Nottingham.

For pharmaceutical preparations and substances for oral and dental use (5)

ORALDENE, 806,028, by Warner-Lambert Pharmaceutical Co., Morris Plains, New Jersey, U.S.A.

For disinfectants containing pine extract, for sale in the United Kingdom otherwise than for export, but not excluding goods for export to the Irish Republic (5)

Device with words SANPIC GOLDEN PINE, 809,230, by Reckitt & Sons, Ltd., Hull, Yorks.

For pharmaceutical preparations, being agents for use in the diagnosis of diseases affecting the bronchi (5)

BRONCOPAQUE, 810,882, by Winthrop Group, Ltd., Surbiton, Surrey.

For pharmaceutical preparations for external application in the treatment of rheumatism and of like ailments (5)

RHEUMATEZE, B811,551, by Rheumateze Products, Gatley, Ches.

For pharmaceutical preparations for human use in the treatment of obesity (5)

OBESEDOL, 811,811, by Winthrop Group, Ltd., Surbiton, Surrey.

For pharmaceutical preparations for the treatment of ulcers (5)

ULSWELL, 811,977, by I. W. Reynolds, Ltd., Dungannon, Tyrone, Northern Ireland.

For pharmaceutical preparations and substances for human and veterinary use; sanitary substances and disinfectants (5)

ALDERCILLIN, 814,036, by Imperial Chemical Industries, Ltd., London, S.W.1.

For steroid pharmaceutical preparations (5)

TRI-ADCORTYL, 812,104, by E. R. Squibb & Sons, Ltd., London, W.1.

For bandages, material prepared for bandaging, medical and surgical plasters, and surgical dressings (5)

SALVAQUIK, B814,813, by T. J. Smith & Nephew, Ltd., Hull, Yorks.

For infants' and invalids' foods, being foods for export (5)

Device with words ROBINSON'S ROBSWEET, B816,182, by Reckitt, Colman, Chiswick (Overseas), Ltd., Hull, Yorks.

For chemical preparations for killing weeds (5)

REDLEGOR, 817,067, by J. D. Campbell & Sons, Ltd., Cornbrook, Manchester, 16.

For pharmaceutical preparations and substances (5)

NUNZANGIL, 815,804, by A.B. Kabi, Stockholm, 30, Sweden.

For pharmaceutical preparations and substances, being parasiticides for human and veterinary use (5)

TROPICIDE, 818,611, by Wellcome Foundation, Ltd., London, N.W.1.

For surgical ligatures made of netting or in the form of bands, and surgical dressings, all made from threads or from fibrous materials; plasters (medical and surgical), bandages, and materials prepared for bandaging (5) *and for combs, sponges, brushes; and materials prepared for brush making* (21)

Device, 814,099, 814,101, by Veb Thüringisches Kunstfaserwerk "Wilhelm Pieck" Schwarza, Rudolstadt, 2, Germany.

For deodorants, disinfectants and sanitary preparations and substances (5) *and for containers for deodorants, disinfectants and the like substances, adapted to dispense their contents in aerosol form, and containers for the aforesaid substances in solid form* (21)

RACAIR, 817,444-45, by Racasan, Ltd., Ellesmere Port, Ches.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED

From the "Official Journal (Patents)," June 14

Antibiotic and a process for its production. Takeda Pharmaceutical Industries, Ltd. 873,893.

Treating permeable materials to render them bacteriostatic. Armour & Co. 874,027.

Derivatives of antibiotiques having a basic reaction, and a process for their preparation. Soc. Industrielle pour la Fabrication des Antibiotiques. 874,028.

Method of combating mematodes. Farbenfabriken Bayer, A.G. 873,927.

Triazaindolizine compounds. Ilford, Ltd. 874,204.

Cobalamin-peptide complexes. Distillers Co., Ltd. 874,230.

Basic derivatives of salicylamide. Knoll, A.G. 874,206.

Di-quaternary ammonium compounds. CIBA, Ltd. 874,032.

Production of ureas. Monsanto Chemical Co. 874,325.

2-methyl-2-n-propyl-N-mono-substituted-1:3-propanediol dicarbonates and method of manufacture. Carter Products, Inc. 873,908.

Process for the production of a (p-nitrobenzyl) a-bromoacetic acid esters. Egyesult Gyogyszer Es Tapszergyar. 874,361.

Process for the production of a-(p-nitrobenzoyl)-aphthalimino-acetic acid estetrs. Egyesult Gyogyszer Es Tapszergyar. 874,362.

Process for the production of (p-nitrobenzoyl) (o-carboxybenzoylamino) acetic acid esters. Egyesult Gyogyszer Es Tapszergyar. 874,363.

Bacterio-static esters of substituted hydroxybenzoic acids. Monsanto Chemicals, Ltd. 874,236.

Process for the preparation of 1-(p-nitro phenyl)-2-(o-carboxybenzoylamino) 1:3-propanediol. Egyesult Gyogyszer Es Tapszergyar. 874,364

Preparation of steroids. Chas. Pfizer & Co., Inc. 874,188.

Steroids and the manufacture thereof. Upjohn Co. 874,374-75, 874,213-14.

Method of producing anthraquinanes. American Cyanamid Co. 873,874.

Process for the stabilisation of sulphur trioxide or oleum. Farbenfabrik Wolfen Veb. 874,344.

Piperazine derivative. Soc. des Usines Chimiques Rhone-Poulenc. 874,096.

Tropine esters. Lepetit S.p.A. 874,015.

4 *a-methyl steroids.* British Drug Houses, Ltd. 874,142.

Chloral derivative. British Drug Houses, Ltd. 874,246.

Iodinated benzoic acid derivatives and methods of preparing such derivatives. Mallinckrodt Chemical Works. 873,888.

Aralkylbenzmorphan derivatives. Smith Kline & French Laboratories. 873,925.

1-Methyl-1-(1-Phenyl-2-propyl)-hydrazine. Abbott Laboratories. 874,198.

Process for the production of N-sulphanilyl-N-butyl urea. C. F. Boehringer & Soehne, G.m.b.H. 874,070.

3-acyloxy-3-aryl pyrrolidines. Mead Johnson & Co. 874,216.

Normarphine derivatives. A. Boehringer, E. Boehringer, I. Liebrecht, J. Liebrecht and W. Mayer-List (trading as C. H. Boehringer Sohn), 874,217.

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Process for the production of alphaamino-beta-hydroxy-carboxylic acids. Farbenfabriken Bayer, A.G. 874,152.

Shampoo compositions. Chemische Fabriek Andrelon N.V. 874,186.

Anti-seborrheic and scalp preparations. I. I. Lubowe. 874,368.

Process for preparing and purifying warfarin sodium. Wisconsin Alumni Research Foundation. 874,149.

Aerosol container with valve. P. Meshberg. 874,012.

Chromatography tanks. Shandon Scientific Co., Ltd. 873,880.

British patent specifications are obtainable (price 3s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2.

CONTEMPORARY THEMES

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METHICILLIN. Treatment of infected burns with. *Lancet*, June 17.

ASTHMA. Steroids in the long-term treatment of. *Lancet*, June 17.

STAPHYLOCOCCAL CROSS-INFECTION. Control of, in surgical wards. *Lancet*, June 17.

INTERFERON. Specificity of. *Brit. med. J.*, June 17.

VITAMIN B_{12}. Therapeutic effect, utilisation, and fate of injected vitamin B_{12} in man. *Brit. med. J.*, June 17.

COLLAGEN. Structure of. *Nature*, June 10.

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APOCHOLIC ACID. Carcinogenic activity of. *Nature*, June 10.

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CITRININ. Chemical structure of. *Nature*, June 17.

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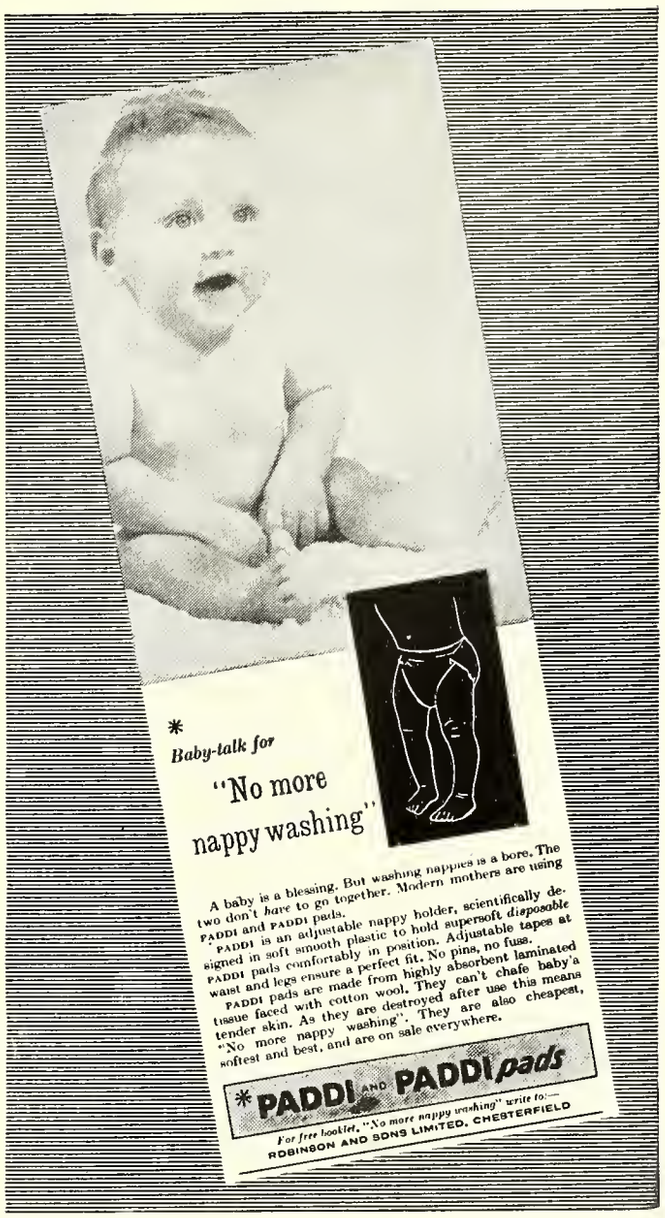
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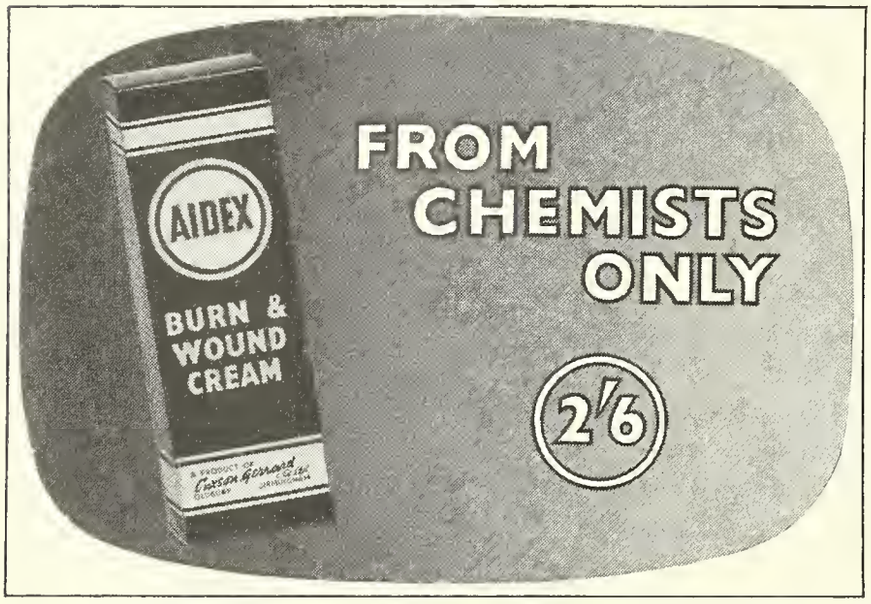
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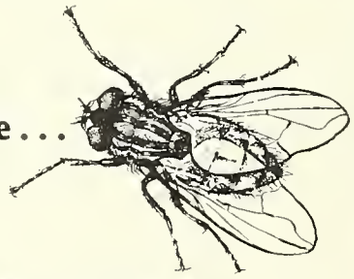
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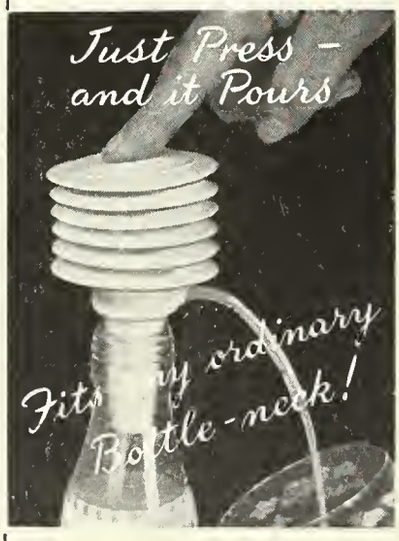
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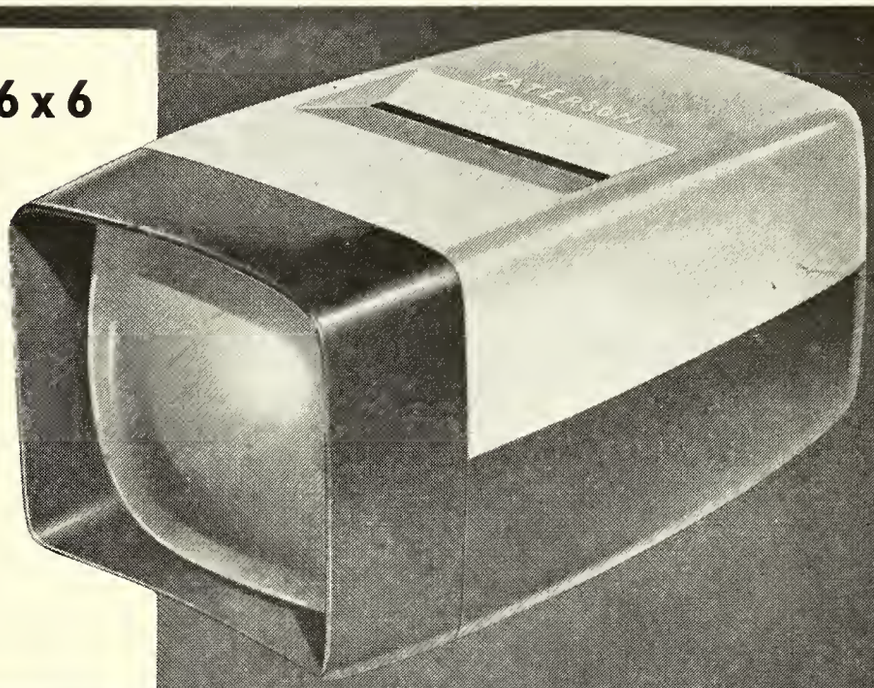
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PRICE **52/6**



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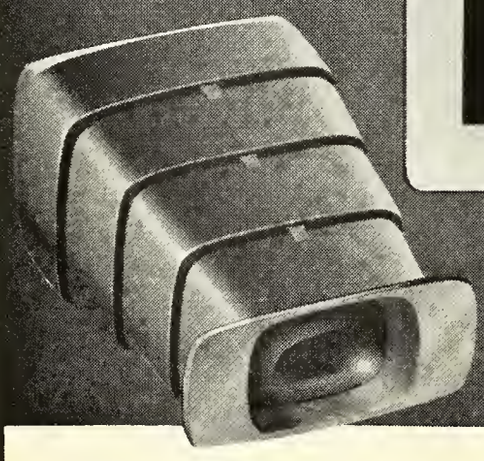
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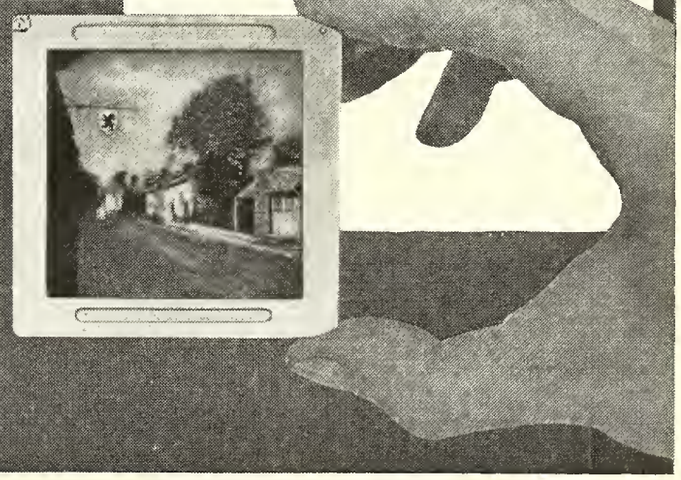
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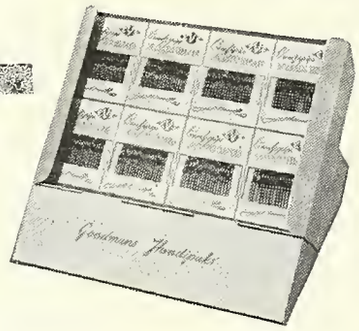
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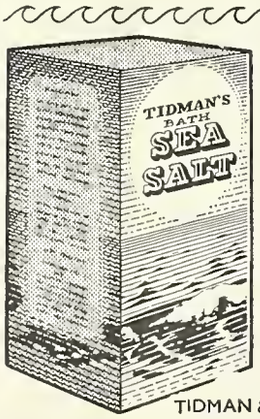
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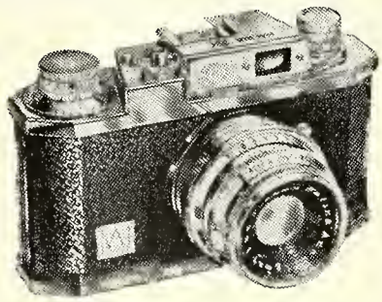
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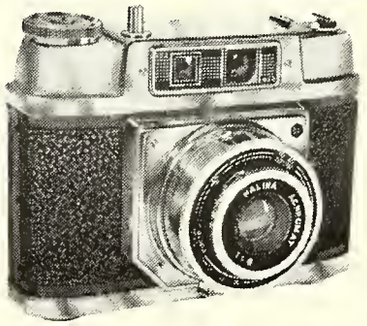


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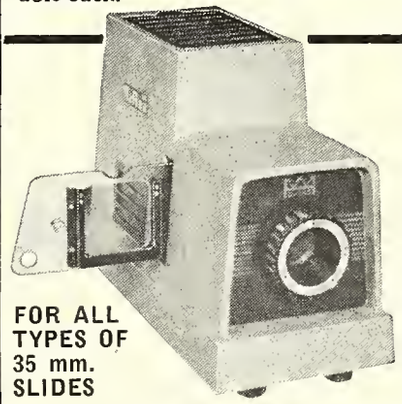
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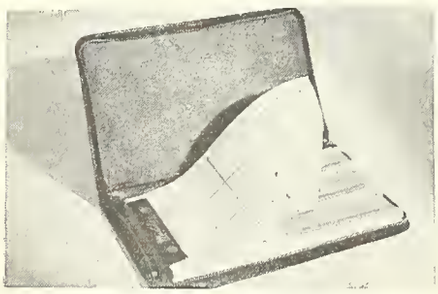
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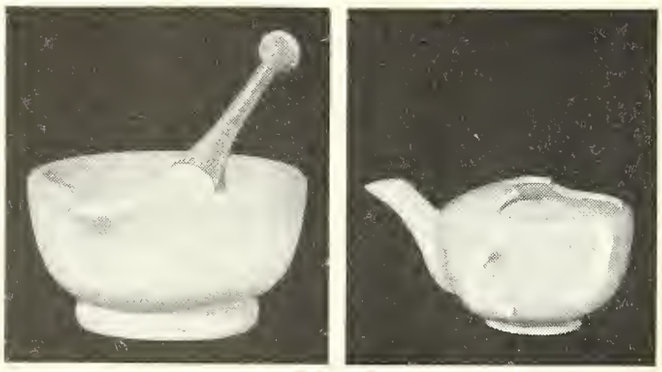
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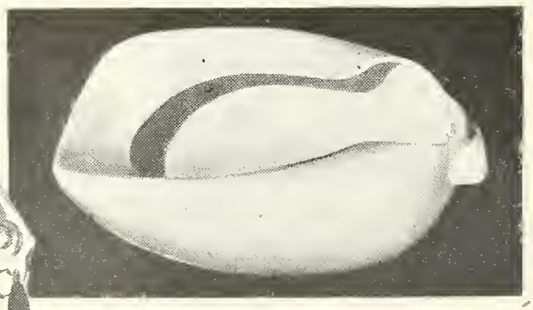
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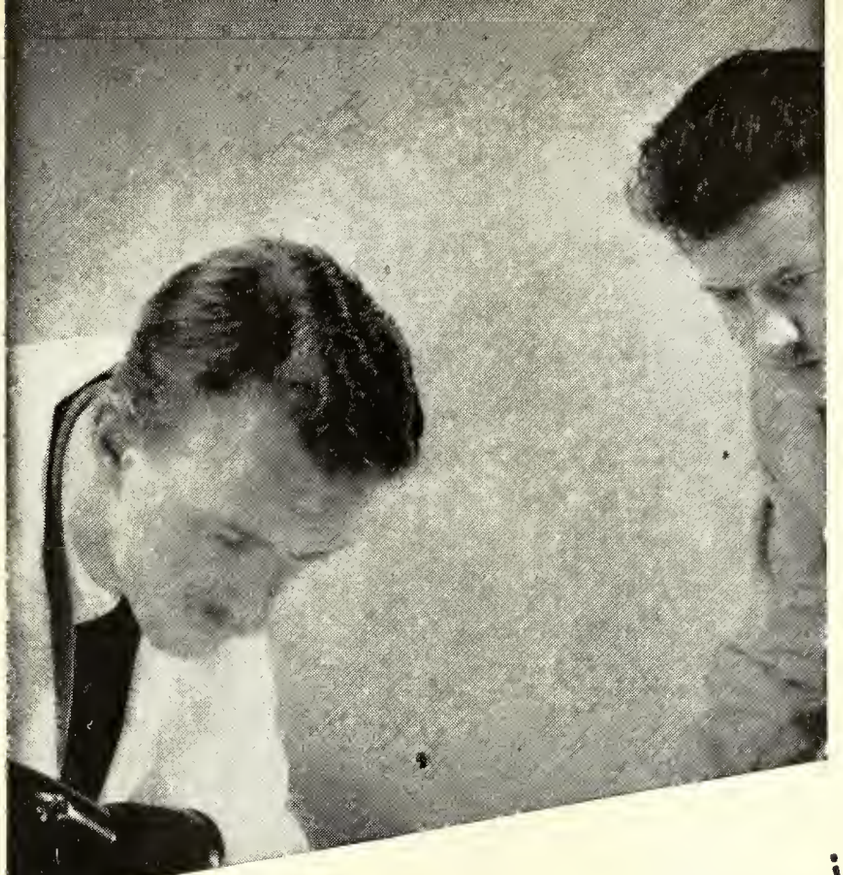
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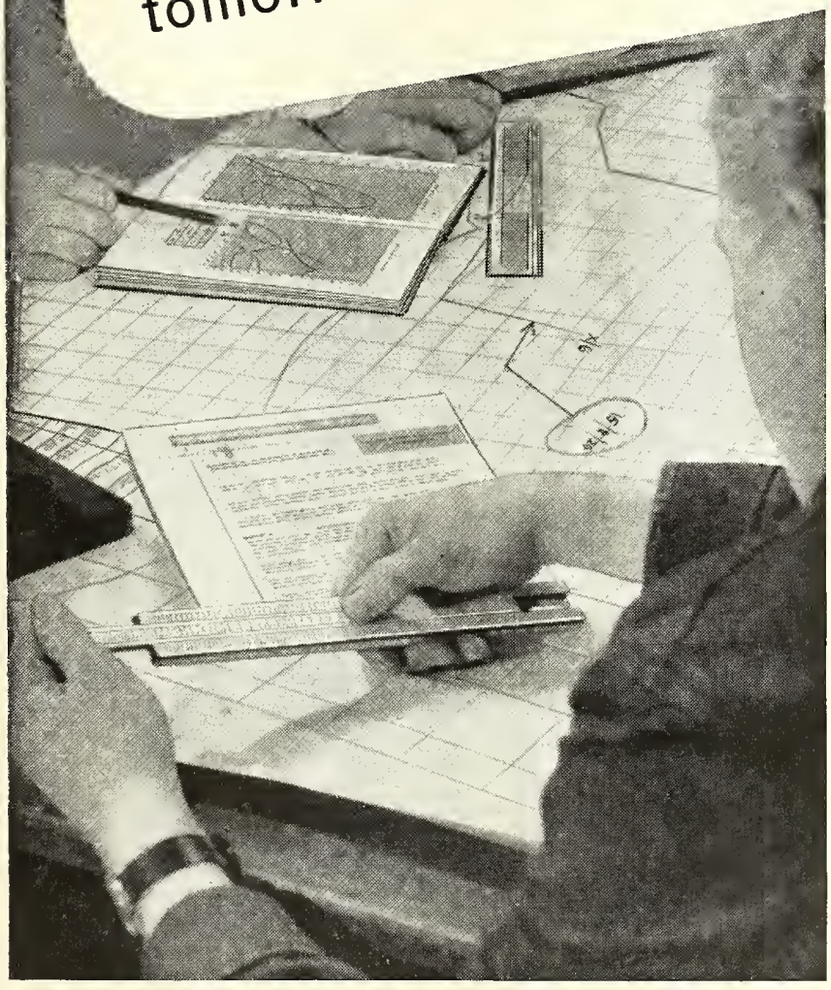
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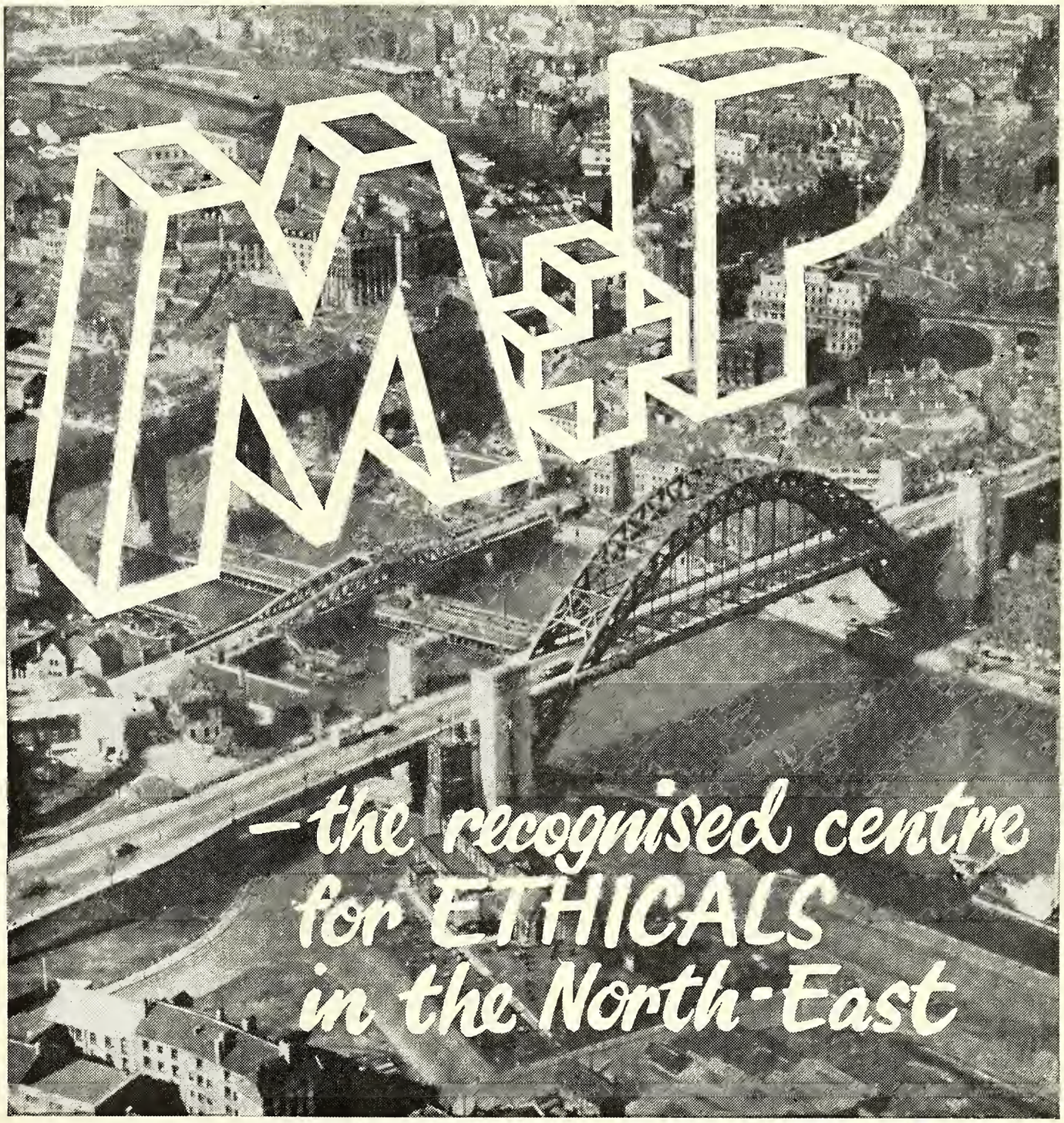
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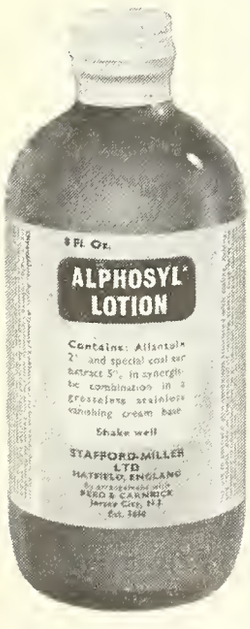


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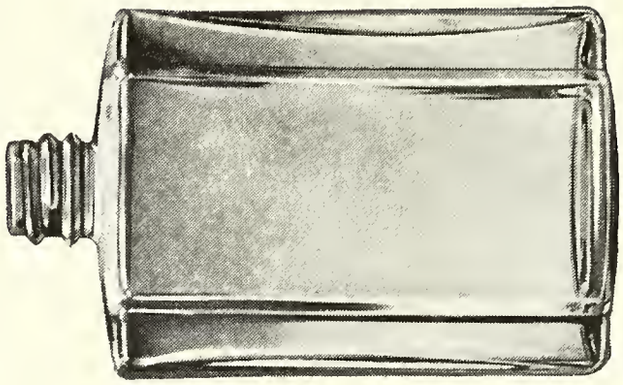
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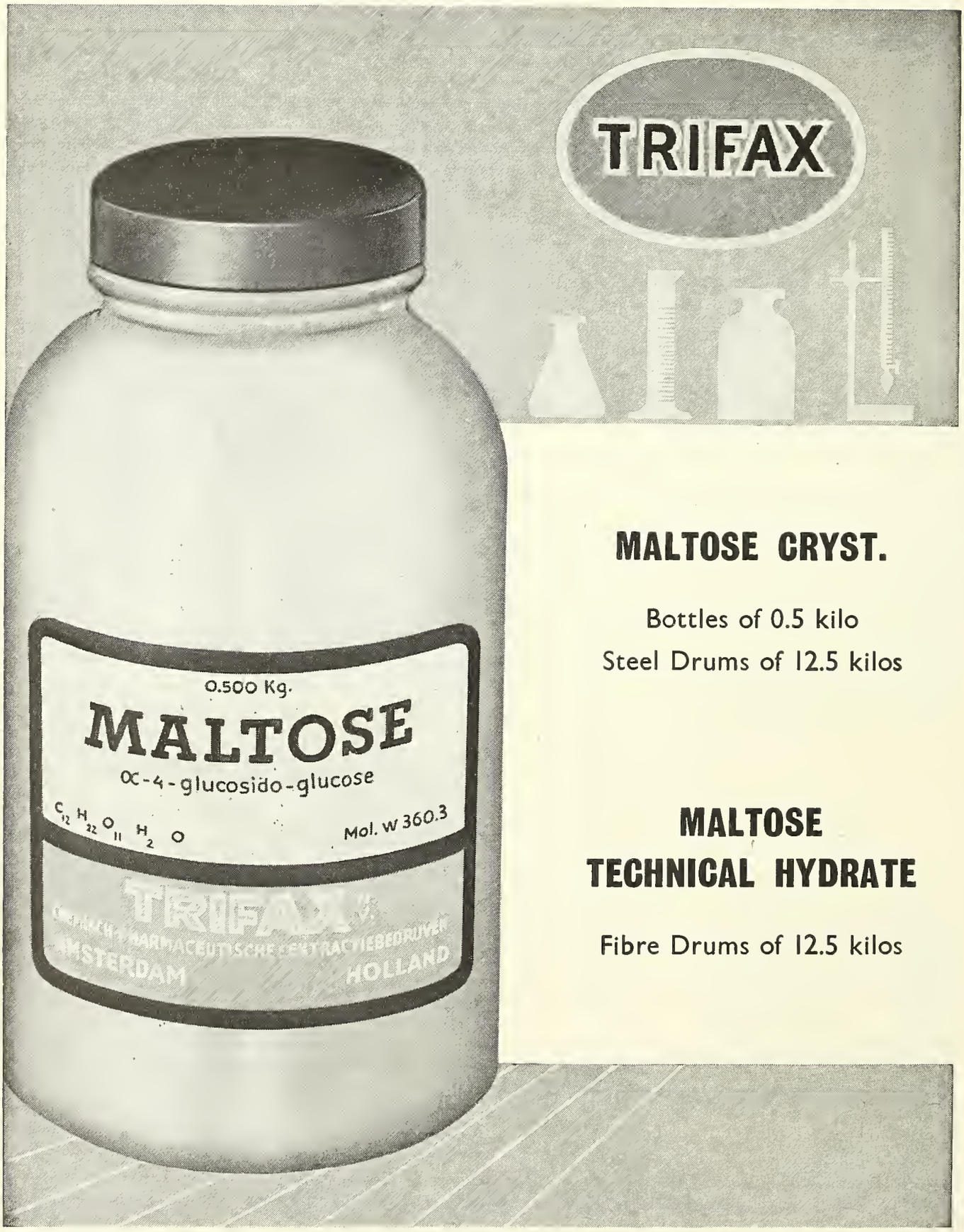




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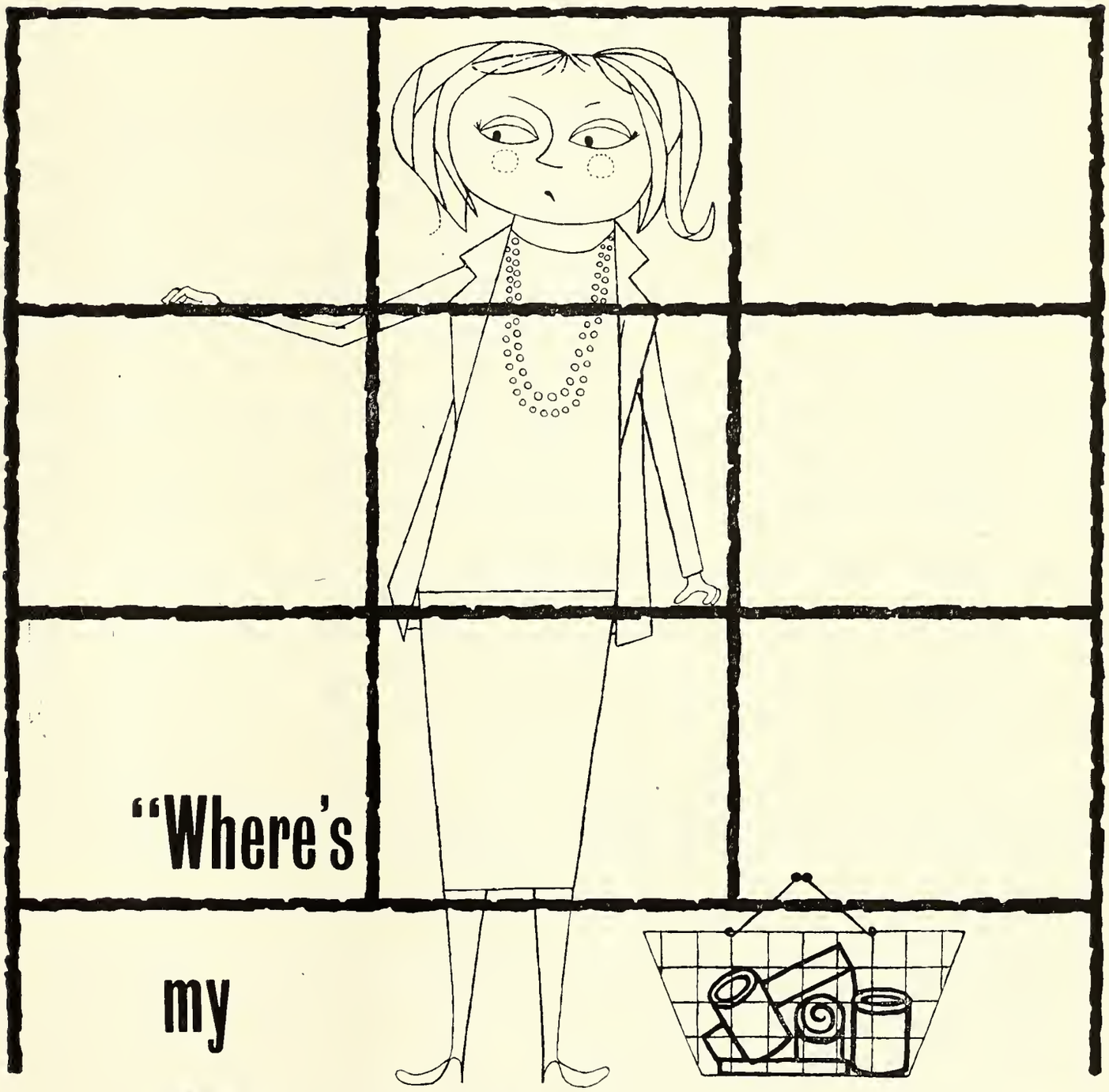
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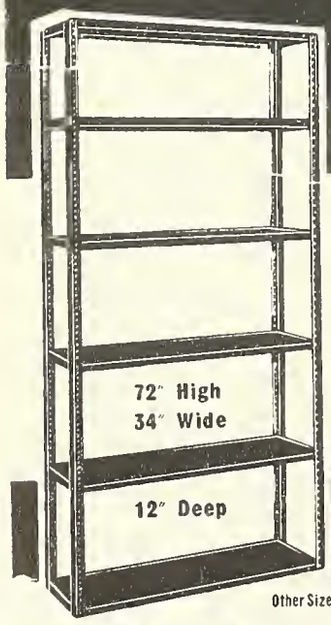
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NATIONAL HEALTH SERVICE JOINT PRICING COMMITTEE FOR ENGLAND
Applications are invited for the post of Superintendent of the Newcastle No. 2 Pricing Bureau, which will shortly open in Newcastle-upon-Tyne.
The salary scale is £1,185 x £40 (1) x £50 (4)—£1,425 p.a.
The Superintendent is responsible to the Committee for the efficient operation of the Bureau and the duties entail, among other things, resolving the many problems arising from the pricing of National Health Service Prescriptions. Pharmaceutical and administrative experience are desirable together with ability to supervise staff.
The selected candidate may be required to pass a medical examination.
Applications giving age, education, qualifications, experience and the names of two referees should be sent to the Clerk of the Committee, 38 Northumberland Street, Newcastle-upon-Tyne, 1, by July 3, 1961.
C 6651

NEASDEN HOSPITAL, BRENTFIELD ROAD, N.W.10 (207 beds)
Chief Pharmacist
(Category II) required. Applications to Physician Superintendent. C 6646

NEASDEN HOSPITAL, BRENTFIELD ROAD, N.W.10
Part-time Pharmacist
required. Hours by arrangement. £1 18s. 8d. per 4-hour session. Apply to Physician Superintendent. C 6665

NORTH WIRRAL HOSPITAL MANAGEMENT COMMITTEE, VICTORIA CENTRAL HOSPITAL MEDICAL UNIT, MILL LANE, WALLASEY, CHESHIRE
Pharmacist
Applications are invited for the above appointment. Salary £690 x £30 (3)—£780 x £35 (4)—£920 per annum.
Conditions of Service in accordance with Circular PH26 of the Whitley Council.
Applications with names and addresses of two referees to Hospital Secretary. C 6570

PINEWOOD HOSPITAL, NINE MILE RIDE, WOKINGHAM, BERKS (Category II)
Locum Pharmacist-in-Charge
for three weeks from August 28. Salary £22 1s. per week. Residential accommodation may be available. Applications to Secretary. C 6600

ASSISTANT REQUIRED
(UNQUALIFIED)

Male or female in bulk-dispensary dept. of manufacturing chemists in N.W. London to compound existing established products to working formulae under qualified supervision. (Whenever necessary.)

The products are mainly Syrups, lotions and creams, and are prepared in batches of 20-30 gallons and 28-56 lb. creams.

5 day week, holiday arrangements honoured. Wages to commence £13 to £15 weekly according to experience and suitability. Pension scheme. Write Box C 3734

Stafford Allen & Sons Ltd

require a representative for the London and Home Counties

Applicants should be aged 26-35. The position offered is permanent and the best form of representation, with large scope for an active man. The work involves calling on manufacturers and wholesalers, no retail. Car will be provided and expenses paid. Write giving full details to Managing Director, Stafford Allen & Sons Ltd., 20/24 Wharf Road, London, N.1.

C 663

VINE'S BIOCRIN LTD.

Have pleasure in announcing that from May 16th they have acquired the sole manufacturing and distribution rights of :

★ **OATINE Preparations**
★ **ARTORAL Denture Powder**
★ **ROYAL COURT TINTONA Hair Dyes**
★ **SURAMA Medicated Cigarettes**

All enquiries and orders should be sent to :

VINE'S BIOCRIN LTD.,
222 & 224, Harrow Road, Paddington, London, W.2.
Tel: CUNningham 1172/3

C 6552

ROWLEY BRISTOW GROUP H.M.C., ROWLEY BRISTOW ORTHOPAEDIC HOSPITAL, PYRFORD, WOKING, SURREY
Part-time Pharmacist
in sole charge, male or female, required at the above hospital on the basis of 6 sessions per week at the rate of £2 10s. per 4-hourly session daily. Sessions to be worked 9 a.m.—1 p.m. but subject to slight variation if necessary. Applications stating age, experience, qualifications and details of previous employment together with names of two referees, to be forwarded to the Group Secretary as soon as possible. C 3744

WINWICK AND NEWCHURCH HOSPITAL MANAGEMENT COMMITTEE
Senior Pharmacist
Applications are invited for the above post in the Group Pharmaceutical Department at Winwick Hospital, near Warrington. (2,684 beds.)
Salary £770 rising by annual increments to £1,010.
Applications, giving date of birth, full particulars regarding qualifications and experience together with names and addresses of two referees, should be forwarded to the Secretary (Ref.: C&D/232), Winwick Hospital, Warrington, as soon as possible. C 6654

EDUCATIONAL

LONDON COLLEGE OF PHARMACY AND CHEMISTRY FOR WOMEN

7 Westbourne Park Road, W.2

Established 1892

The only College in S.E. England teaching exclusively for the Assistant-in-Dispensing Examination of the Society of Apothecaries. Enrolling now for six months' full-time course for Student Dispensers under 1956 Regulations. 82 per cent. Examination successes in 1960. C 404

SITUATIONS VACANT

ORRIDGE & CO., 184 Strand, London, W.C.2, require stocktakers. Previous experience an asset but not a necessity. Further details from Temple Bar 9212 or by letter. C 6658

RETAIL (HOME)

HERTS AND BEDS. Pharmacist wanted for locum duties by private firm with seventeen branches in Herts and Beds. Interview arranged on any day to suit applicant when full details can be discussed. Expenses paid. E. E. Russell (Chemists), Ltd., 42 Whitehorse Street, Baldock, Herts. C 3747

HITCHIN, HERTS. Experienced unqualified assistant wanted, chiefly for dispensing. Permanent post in busy market town. Pension and life assurance. Full details at interview for which expenses paid. E. E. Russell (Chemists), Ltd., 42 Whitehorse Street, Baldock, Herts. C 3746

PHARMACIST-GENERAL MANAGER

Required for a company in the Merseyside area owning a compact group of retail pharmacies.

Applicants must be pharmacists with managerial experience in retail pharmacy and able to control all aspects of the business. Commencing salary £1,750 to £2,000 plus bonus. Pension Scheme.

Applications with full details should be sent to BOX No. J867, Lee & Nightingale, Liverpool, 2.

C 6655

QUALIFIED LADY DISPENSER required for group practice of four doctors to assist present dispenser with dispensing and general practice management. Details from Dr. T. E. Ormerod, 52 Linden Avenue, Kettering, Northants. Tel.: Kettering 2104. C 3653

UNQUALIFIED assistant wanted for dispensing and counter work. Congenial family business. Flat available. Holiday arrangements respected. S. F. Brown, Ltd., 25 Quarry Hill Road, Tonbridge, Kent. Telephone 3950. C 3745

UXBRIDGE. Urgently required, senior assistant with all-round experience of good-class pharmacy, mainly counter duties and relief dispensing. Holiday granted. Apply in the fullest particulars to: R. A. Sharp Chemists Limited, 172 High Street, Uxbridge. C 3630

WHOLESALE

DISPENSER REQUIRED to work in market research department, Central London. Five-day week. Good Salary. Box C 6645.

WHOLESALE AND INTERNATIONAL DIVISIONS

Applications are invited from graduates in Chemistry or Pharmacy for a vacancy as Assistant to the Marketing Manager for Fine Chemicals within our Home Wholesale Division.

Applicants should be aged between 25 and 35 and should have had some experience on the chemical or pharmaceutical side of the industry. The successful applicants will be concerned in the sale of bulk fine chemicals and in developing markets for new chemicals arising from the Company's expanding interests in this field. The appointment will be based in Nottingham but will entail some travelling within the United Kingdom.

Applications, which should state full details of age, experience and qualifications, will be treated in confidence and should be addressed to the Personnel Manager, Boots Pure Drug Company Limited, Station Street, Nottingham, quoting reference No. C.D.1.

C 6662

FOR THOSE HAVING ABILITY, courage and tenacity. A vacancy occurs in a pharmaceutical house of repute and moderate size planning additional enterprise outside present field of activity, to work with the Sales Director on internal control and existing trade during a preparatory phase, and later to accept responsibility in the final stages of production of new projects. Prospects are those associated with ability to create and maintain growth. Applications in confidence from male pharmacists or R.I.C. Chemists not over 30 years. Box C 6668.

PROCESS WORKER

Experienced Process worker required by Wright Layman & Umney, Ltd., for the manufacture of Galenicals. Excellent working conditions, good wages; canteen service; pension fund; 42-hour 5-day week. Apply with full details of previous experience to Works Manager, 66/76 Park Street, Southwark, S.E.1.

C 6628

GRADUATE with bacteriological and pharmaceutical training and experience required to develop and later control the manufacture of a range of sterile products. Prospects for a suitable man are good. Applications, which will be treated in strict confidence, should give age, experience, qualifications and starting salary required to Box 359, Woolward Advertising, Ltd., 86A George Street, Edinburgh. C 6661

REPUTABLE old-established company, manufacturers and importers of a few very well introduced branded lines requires Representative who is well known to buyers of wholesale warehouses, department stores, etc. Preferred to cover the whole of the U.K. with own car. Offers with references from gentleman who can prove his efficiency within 4 weeks' trial period. Box C 6664.

SALES PROMOTION EXECUTIVE. Manufacturing chemists supplying retail trade through distributing houses require the services of sales promotion executive for London area and South Coast to foster and maintain the interest of the retail and wholesale trade in its proprietary products and to introduce new products from time to time. A knowledge of the trade is essential and applicants should not be more than 40 years of age. Good salary, car and expenses, non-contributory pension scheme after qualifying period. Write in first instance to: Box C 6498.

PRODUCTION MANAGER

The U.K. subsidiary of a prominent American manufacturer of toilet and pharmaceutical preparations requires a capable, versatile man, to manage small factory and expand processing and packaging operations to Ethical pharmaceuticals.

A pharmaceutical or chemical qualification and production experience are essential. Holiday arrangements will be honoured.

The position offers a good salary and the opportunity to advance with an expanding company. Reply, in condence, to the:

Managing Director, Pretested Products, Ltd., Maple Cross, Rickmansworth, Herts.

C 6641

SALES EXECUTIVE

An opportunity occurs in a well-established British wholesale and manufacturing chemists situated in the North West for a pharmacist or someone with a pharmaceutical background as Assistant Sales Manager. Graduateship of ISMA or a full knowledge of modern marketing methods is essential as the position offered requires ability in both sales office routine and field work. Good salary, pension scheme and excellent prospects for the right person with the keenness and enthusiasm to succeed in this interesting appointment. HSD, Box C 6618.

WHOLESALE CHEMISTS (South Lancs) require supervisor to take charge of order assembly department. A thorough knowledge of ethicals and proprietaries is essential. Applicant must be prepared to accept responsibility and be able to control staff. Please give full details of experience, age and indicate salary required. Box C 3730.

RETAIL CHEMISTS

A unique opportunity to occupy a shop unit, with living accommodation, in modern shopping

MONOPOLY PARADES

serving large Housing Estates at

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HORSHAM
NOTTINGHAM
SOLIHULL

TO LET

21 year leases — low rents

NO COMPETITION NO DUPLICATION OF TRADES

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NORMAN HIRSHFIELD & PARTNERS

85 George Street, Portman Square, London, W.1
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C3732

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Chemists' Transfer Agents and Valuers
41 ARGYLE SQUARE, KING'S CROSS, W.C.1
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VALUATIONS for all purposes
BUSINESSES urgently required
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TRANSFERS without publicity our speciality

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CHEMIST'S DICTIONARY OF MEDICAL TERMS 7th Edition

Prepared primarily for pharmacists, the Dictionary is indispensable also for pharmaceutical manufacturers, advertising agents concerned with the marketing of medicinal products and indeed all who have to find their way around among the multifarious medicinal compounds of modern times.
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THE CHEMIST & DRUGGIST
28 ESSEX STREET, STRAND, LONDON, W.C.2

Situations Vacant—Continued

WINTHROP LABORATORIES require tablet maker and/or tablet coater for their modern factory at Edgefield Avenue, Newcastle-upon-Tyne, 3. Excellent working conditions, salary by arrangement. Applications in writing giving full details should be addressed to the Personnel Officer. C 6647

AGENTS WANTED

AGENT, well-established, required to sell exclusive lines of novelty perfume to chemists, stores and perfumeries. Commission 10 per cent. Kinkibee Characters, Ltd., 37 Old Bond Street, London, W.1. Hyde Park 9449 and Hyde Park 0035. C 3752

AGENTS REQUIRED throughout the country calling on chemists, stores, ladies' hairdressers, for a well-known Swiss preparation now being introduced in this country. Generous commission. Apply in confidence to Box C 3733.

FIRST-CLASS AGENTS required in important areas for a well-known cosmetic company. Send full details to Box C 6633.

SITUATIONS WANTED

RETAIL (HOME)

EXPERIENCED DISPENSING ASSISTANT (male) residing London area. Available for responsible position. All areas considered and acknowledged. Hours and salary by agreement at interview. Recommended. Box C 3729.

EXPERIENCED PHARMACIST seeks locum for the period September 18 to October 14, London or vicinity. Accommodation for self and wife essential. Reasonable fees. Phone: Riverside 9377. C 3742

NORTHERN SCOTLAND area. Experienced locum requires duties for two weeks from July 31st. Accommodation required. Box C 3749.

SOUTH AFRICAN (28), at present in London, seeks responsible position as representative for ethical house in South Africa. Wide experience in retail pharmacy. Phone: RIV. 9377. C 3743

WHOLESALE

CHEMIST (42), Irish qualification, desires position, wholesale, London. Widely experienced all branches pharmacy, including own business. Box C 3740.

GENTLEMAN, aged 32, single, unqualified, seeks progressive sales position with manufacturing firm, home or overseas. Experience includes one year as medical representative in U.K., seven years' ethical medical representation, some administration and training of representatives overseas in Ceylon, Burma, Pakistan, Ghana, Nigeria, Kenya, Uganda and Tanganyika. Box C 3716.

REPRESENTATIVE. Due to reorganisation seeks new situation. 13 years' experience, one company. Thorough knowledge of the trade including sundries. South London, Surrey or Berkshire. Box C 3737.

YOUNG GENTLEMAN, graduate in pharmacy, seeks position in industry or manufacturing chemist. Box C 3750.

AGENCIES WANTED

ADVERTISER, with wide and well-established connection in N.W. England and N. Wales. Goodwill built up over many years among all good-class chemists, stores and perfumery outlets; seeks one or two sound, good-class agencies. Box C 3739.

BUSINESS OPPORTUNITIES

GERMAN PHYSICIAN

Age 59 years, resident in Frankfurt-on-Main, with industrial experience, seeks sole representation for West Germany, including branch factory (warehouse) for West Germany for British chemical industries (plastics, synthetic fibres, improvement additives, dyestuffs, basic pharmaceutical products, antibiotics, and fertilisers).

Offers to :
DR. G. LAVE,
Frankfurt-on-Main,
Mainzer Landstrasse 96
(Tel.: 336678)

C 3731

WANTED

LARGEST CASH BUYERS. Goods of every description. Whole or part shop stocks purchased, also soiled or miscellaneous goods. Our buyers will call for large or small quantities, distance no object. Write or phone: **C. & R. Strong, Ltd.,** 29 Toynbee Street, London, E.1. Phone: Bishopsgate 6066. C 3549

SURPLUS CAMERAS, ENLARGERS, CINE CAMERAS & PROJECTORS PHOTOGRAPHIC EQUIPMENT OF EVERY DESCRIPTION, SURPLUS and OUTDATED FILM & PAPER. Phone, write or call:—
SPEARS
(Dept. D.), Watling Street, Shudehill, Manchester.
Phone: Blackfriars 9432 (5 lines)
Bankers: Midland Bank, Ltd.
C 438

Wanted—Continued

SURPLUS STOCKS of perfumery and toilet bottle caps, packaging materials, etc. Submit details of offers to Box C 6648.

URGENTLY required for cash, chemists' surplus stocks, bulk or part, particularly toilets, cosmetics, sundries, discontinued manufacturers' lines welcomed. Films, photographic equipment, sunglasses, binoculars, electric razors, Christmas coffrets and fancy goods, etc. Write immediately to Reginald Loftus, 263 Portswood Road, Southampton. Tel.: 54757. C 521

WE WILL PURCHASE for cash a complete stock, a redundant line, including finished or partly finished goods, packing raw materials, etc. No quantity too large. Our representative will call anywhere. Write or telephone: Lawrence Edwards & Co., Ltd., 6/7 Wellington Close, Ledbury Road, London, W.11. Tel.: Bayswater 4020 and 7692. C 140

SALE BY AUCTION

B. NORMAN & SON,
2/5 Little Britain (close to G.P.O.),
London, E.C.1,

will sell by auction, Wednesday, July 12 at 1.30 p.m. practically new light oak SHOP FIXTURES, drug runs, wall showcases, glass counters, nests of drawers, mirrors, cash tills, office furniture, etc. View day prior and morning of sale. Catalogues available. MON. 8501/2. C 6656

B. NORMAN & SON

will sell by Auction on Wednesday, June 28, at 1 o'clock, the Departmental Store Fixtures of E. & R. Garrould, Ltd., 150/162 Edgware Road, London, W.2, including some 50 plate glass counters (mostly in bronze metal frames), showcases of various kinds and general equipment. Catalogues of the Auctioneers, 2/5 Little Britain, E.C.1. C 6657

MACHINERY FOR SALE

COMPLETE PLANT for producing compressed tablets, comprising compressor D3A, Varispeed, 1954, Rotorgran, 1954, mixer, old type (all Manesty machines), drying cabinet, steam heated (½-ton capacity), three sets of dies and punches and one hundred aluminium trays. French & Sons, Ltd., 141 Chatham Road, Battersea, S.W.11. Battersea 0855. C 3719

2 ALITE stainless dry mixers, 1 cwt. capacity. 1 Alite powder filler. Various carton wrapping machines. All in excellent condition being very little used. Please reply to Box C 3681.

GARDINER powder mixing machine, 30 lbs. capacity, perfect condition, very little used. Price £40. Box C 3741.

MANESTY 3A MACHINE for bath cubes. 1 auto wrapper completely overhauled at the cost of approximately £300, not yet used. £1,200 or near offer ex-factory. Box C 3748.

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PLASTIC BABY PANTS, 8/9 per Doz.

Large Size.
Rose Scented and Lanolin Impregnated.
Elastic or Taped Legs.

In Counter Display Boxes or Cellophane Bags (insertion of your own Advertising Matter can be arranged).

Sample on request.
Special Quotations for Quantities.

A. & H. Heyman,
27 Grange Road, Darlington.
Tel.: 3186
C 3718

IS PRICING YOUR PROBLEM ?

KENNETT PRICE MARKERS

are ultra smart, beautifully designed solid plastic markers that will really sell your goods. Send now for free samples, absolutely no obligations. 55 Eastgate Street, Winchester, Hants. C 409

FOR SALE

BEST QUALITY TABLETS of aspirin B.P. gr. 5 in one million lots for 3/4d. per thousand, ex works. Larger quantities on contract at reduced price. Box C 6653.

20% DISCOUNT. Carpets, etc. All types. British and Oriental. Axm. and Wilton. Broadloom or fitted. Usual guarantees. Free delivery. For introduction to Manchester or London Showrooms, or postal requirements. Write: Gekay Carpet Suppliers, 754 Rochdale Road, Royton, Lancs. C 3727

MERCURIC CHLORIDE B.P.C. Prices from 19/- to 38/6 lb. according to quantity required.

Independent Analysis over four months:—White crystalline powder free from visible impurities.

Assay—mercuric chloride 99·7/99·9 per cent. $HgCl_2$.

Non-volatile residue, nil. Water insoluble—nil—clear and bright solution (5 g. in 100 mil). Alcohol—insoluble—nil—clear and bright solution (1 g. in 20 mil. of 90 per cent. alcohol).

Limit tests: Sulphate, less than 0·01 per cent. SO_4; Iron, less than 0·01 per cent. Fe; Arsenic, less than 0·0001 per cent. As_2O_3.

Any quantity supplied. E.E.C.I., Tollesbury, Essex. C 3711

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GORDONIA PROPHYLACTICS

Wallets of 3, packed in attractive display outers.

30s. per gross.

Write for free samples and special terms for quantities.

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C 6604

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FAMOUS NOVELTY HAIR ROLLERS

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CUMULATIVE LIST OF AMENDMENTS TO THE C.&D. Quarterly Price List

JUNE 1

No. 5 (247 Chanel)
parfum de toilette
atomizer 45 0
refill 27 6
Delete spray Cologne .. .. 300 .. .. ..
Adetate (837 MSD) 16 oz 9 0ea .. †s4B
Alasil (1303 Wander)
Delete juvenile all sizes
Alficetyn (34 A&H)
Delete cream .. .. .. 1 oz
for eye drops .. .. 42 0 5 3 TS
Allenbury's (34 A&H)
Delete diet .. .. .. 1 lb
Allercur (1107 SAGB)
(distributors 973 Pharmethicals)
ointment 500 gm .. 30 0ea .. 45 0 †s7
Delete 300 gm
All Out (931 PDC)
tube dispenser 6
Alocol (1303 Wander)
Delete tablets 500 & 1000
Aminacyl (1303 Wander)
Delete sodium PAS powder 100 gm & 250 gm
Delete cachets 1·5 gm 250
Delete tablets 0·4 gm all sizes
0·5 gm 100, 250 & 1000
0·75 gm 100, 250 & 1000
Delete calcium PAS powder 100 gm, 250 gm & 1000 gm
Delete cachets 1·5 gm 250
Delete tablets 0·5 gm 100, 250 & 1000
0·75 gm 250 & 1000
Delete Amyl nitrite (787 Macfarlan) all sizes
Andre Philippe (48 AP)
Delete brilliantine spray .. A7
Delete complexion milk .. 13
Delete dimple Scotch heather 7
Delete Devon violet .. 7
Delete lanolin hand cream .. 12
men's cream shampoo sachet
105 3 4 10 6
Delete perfume story book .. X1
Delete shampoo 4 oz. .. 22
Delete suntan spray A9
Anita (473 FJ)
coconut-oil shampoo .. 13 8 3 5 2 0
colorised hair lacquer 27 0 13 6 4 6
refill .. 18 0 9 0 3 0
crystal clear setting
lotion 12 0 6 0 2 0
Antidol (757 Lewis)
tablets .. .. .. 20 25 0 .. .. 3 1½
100 108 0 .. .. 13 6
500 520 0 .. .. 65 0
Arrowtabs (62A)
Arrowbrush lipstick style 5 11
Arrowmaster anti-static 8 6
Arrowgard sleeves only 24 .. .. .. 5 6
Arrowmounts .. .. 90 .. .. .. 1 0
250 .. .. .. 2 6
Aspro (894 Nicholas) 3 doz 45 2 11 3½ 1 11
26 9 6 8¼ 3 5
Astral (509 Gibbs)
cream 9 9 4 9 1 6
16 0 7 9½ 2 6
28 6 13 10¾ 4 6
soap toilet 9 0 2 2¼ 1 1
bath 13 0 3 2 1 7
Basque (682 KCL)
continental suntan oil 33 0 16 1 5 6
53 0 25 10 8 9
Bathjoys (1037 Reekitt)
bath cubes 2 6½ 1 3 5
Beaucaire (100 Beaucaire)
cleaning fluid .. 1 gall 360 0 .. .. 39 0
Bell's (107 BH&L)
foot bath powder .. 5 2 1 3½ 9
sunburn milk .. .. 4 oz 21 0 10 6 4 0
Benevit (588 H&H) tonic 28 6 7 0 3 9
Delete Biligrafin (1107 SAGB) single ampoules
Bilora (8 Actina) cameras
Bella super 44 and 46 .. .. .. 119 9
66 .. .. .. 127 6
Bitevan (436 Evans)
ampoules 50 mcgm 10 mils 30 0 .. .. 3 4
100 mcgm 1 mil 6 30 0 .. .. 3 4
10 mils 34 6 .. .. 3 10
1000 mcgm 1 mil 3 48 0 .. .. 5 4
10 mils 144 0 .. .. 16 0
Bromural (708 Knoll)
tablets .. .. .. 20 29 0 .. .. 3 3 †s4B
200 11 6ea .. 15 4 †s4B
Delete Bronchipax (894 Nicholas) 72
Cafdis (1037 Reckitt) .. 20 13 4 3 3 1 9
Carbomucil (896 NPP .. 4 oz 36 0 9 0 4 9
Carovax (208 BW)
pasteurella vaccine (vet) 50 cc 10 6ea .. 15 9
Casino (234 Cartwright)
overnight tan 30 0 15 0 5 0
suntan spray 20 0 10 0 3 9
supertan aerosol .. 34 0 17 0 5 9
Celabs (727 Lane) .. 36 16 1 4 0 2 3
Chandau (116 Benton)
deodorant spray .. 18 0 9 0 3 6
refill 15 0 7 6 2 6
hair nets .. .. doz 2 9 .. ..
hair lacquer spray .. 23 6 11 9 3 11
14 0 7 0 2 4
Hi-Shine aerosol .. 39 0 19 6 6 6
Chantilly (Houbigant (1 Abbey)
Delete perfume 105·38
Delete 105·91
talcum tin .. 149·18 .. .. 7 6
Charabs (727 Lane) .. 36 16 1 4 0 2 3
Delete Chardox (411 EGH)
Chardox (894 Nicholas)
Codis (1037 Reckitt) .. 8 10 10 2 7½ 1 5 †
20 21 0 5 1½ 2 9 †

THIS WEEK'S CHANGES AT END OF LIST

Cooltan (682 KCL)
polythene "travler bottle" 30 3 14 7½ 5 0
Cortelan (518 Glaxo)
Delete eye ointment .. 3 gm
Courtesy (337 Curtis)
cleansing cream .. 8 oz 36 0 18 0 6 6
lotion .. 4 oz 15 0 7 6 3 3
Dalzoband (347 Dalmas)
zinc paste bandage
3½ × 6 yd. No. 2, 2X, 3, 4, 5, 6, 6X .. 28 6 .. .. 3 4
No. 20 .. .. 29 6 .. .. 3 6
Dapsodine (358 D&S)
intramammary tubes 12 231 0 .. .. 27 6 †s4B
syringes .. .. 12 280 0 .. .. 35 0 †s4B
Decadron (837 MSD)
injection vial 2 mils .. 21 0ea .. 31 6 TS
Decaspray (837 MSD) 50 mgm 15 0ea .. 22 6 TS
Denclen (994 P&M) .. 6650 18 3 4 7 2 8
Dequadin (34 A&H)
paint 0·5% 28 mils .. 72 0 .. .. 9 0
Dequalone-P (34 A&H) 15 gm 120 0 .. .. 15 0 TS
Delete Deriphyllin (221 Camden) all sizes
Diajubes (588 H & H) .. C1 14 0 .. .. 1 7
Dindevan (436 Evans)
tablets 10 mgm .. 100 120 0 .. .. 15 0
500 468 0 .. .. 58 6
50 mgm .. 25 66 0 .. .. 8 3
100 216 0 .. .. 27 0
1000 1404 0 .. .. 175 6
Disprin (1037 Reckitt) .. 8 5 6 1 4 9
26 14 5 3 6 2 0
foil 28 14 5 3 6 2 0
50 24 0 5 10 3 4
junior 16 5 6 1 4 9
Distaval (378 DCBL)
suspension 60 mils .. 3 0ea .. 4 6 p1s4B
Dor (563 Hampshire)
aerosol .. .. 375 0 gross 185 0 gross 5 0

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● TABLETS ● SOLUTION ● INJECTION ● PÆDIATRIC ELIXIR

BURROUGHS WELLCOME & CO. *(The Wellcome Foundation Ltd.)* LONDON

Dorant (718 LAB)
mouth wash .. .. 2 oz 24 0 6 0 **3 6**
Drummer (406 WE)
firelighters .. .. 183 gross 0 .. .. **1 9**
Durst (980 Photopia)
automatiea eamera .. D94 456 0ea 111 2ea **795 2**
ease .. D95 34 4ea 8 4ea **59 10**
Delete six-six eamera D111
Edixa (980 Photopia)
camera stereo III E300 396 2ea 96 6ea **690 9**
Edixamat (980 Photopia)
camera reflex standard E178 929 0ea 226 6ea **1620 0**
flex B .. E182 688 0ea 167 8ea **1199 8**
Dele'e flex AL E185
reflex B E198 658 0ea 160 5ea **1147 5**
reflex C E199 757 4ea 184 7ea **1320 7**
reflex D E200 757 4ea 184 7ea **1320 7**
Efcortelan (518 Glaxo)
lotion aerosol 0·5% 30 mils 8 6ea .. **11 4** TS
with neomyein 30 mils 9 0ea .. **12 0** TS
Elimit (221 Camden)
tablets .. .. 100 18 4½ea .. **24 6** †s4B
500 79 10½ea .. **106 6** †s4B
Delete Endografin (1107 SAGB) single ampoules
Delete Eucortone (34 A&H) 10 mils
Eucryl (430 Eueryl)
tooth powder smokers 14 8 3 8 **2 0**
Delete Euphagin (221 Camden) all sizes
Express (1036 RB&C)
powders 8 13 1 3 3 **1 10**
22 33 7 8 5 **4 6**
48 6 0ea 1 6ea
120 14 10ea 3 8½ea
tablets 16 13 1 3 3 **1 10**
Fields (462 Field)
French flowers
dusting powder .. 52 4 26 2 **8 9**
Cologne 36 0 18 0 **6 0**
perfume 24 0 12 0 **4 0**
Freneh pink
dusting powder .. 52 4 26 2 **8 9**
Freneh moss
dusting powder .. 52 4 26 2 **8 9**
Cologne 36 0 18 0 **6 0**
perfume 24 0 12 0 **4 0**
lavender water .. 30 0 15 0 **5 0**
Delete solid brilliantine
Folie aeid (413 Lilly)
tablets 5 mgm .. 100 28 0 .. .. **3 6**
1000 180 0 .. .. **22 6**
Flatterie (Houbigant (1 Abbey)
perfume .. 106·81 .. .. .. **31 6**
Delete 106·91
Framygen (502 Genatosan)
sterile powder 500 mgm 17 0ea .. **25 6** TS
tablets 500 mgm .. 20 75 0ea .. **112 6** TS
100 290 0ea .. **435 0** TS
Fumee (Lubin (1 Abbey)
Cologne eoncentree .. 319 .. .. .. **16 6**
320 .. .. .. **30 0**
perfume .. .. 3260 .. .. .. **52 6**
2361 .. .. .. **85 0**
3262 .. .. .. **135 0**
Furadantin (1153 SKF)
tablets 50 mgm .. 25 15 7½ea .. **23 5**
250 143 6ea .. **215 3**
Gala (876 MP)
natural bloom 33 0 16 6 **5 6**
shadow stick refill .. 27 0 13 6 **4 6**
velvet powder refill .. 27 0 13 6 **4 6**
Galloways (430 Eueryl)
eough syrup 14 8 3 8 **2 0**
24 0 6 0 **3 3**
40 0 10 0 **5 6**
Gastrografin (1107 SAGB)
(distributors 973 Pharmethieals)
bottles 100 mils .. 1 33 4ea .. **50 0**
5 150 0ea .. **225 0**
Gevapan (508 Gevaert)
roll films No. 30 & 33 127 22 0 6 0 **3 3**
No. 27, 30 & 33 .. 120 22 0 6 0 **3 3**
620 22 0 6 0 **3 3**
Delete 116
No. 36 .. .. 120 24 0 6 0 **3 6**
35 mm film daylight ..
refill 36 exp. .. 36 6 9 0 **5 1**
eontinuous length 5 metres 75 6 19 0 **10 7**
17 metres 19 1ea 4 9ea **32 0**
Gin Fizz (Lubin (1 Abbey)
perfume .. 649 .. .. .. **35 0**
650 .. .. .. **52 6**
651 .. .. .. **85 0**
652 .. .. .. **135 0**
621 .. .. .. **294 0**
soap (3) .. 616 .. .. .. **15 0**
taleum bottle .. 836 .. .. .. **10 6**
tin .. 836T **7 6**

Glacier (1106 S)
cream lip salve .. 17 0 4 3 **2 6**
Glo (876 MP) 15 0 7 6 **2 6**
Gordon Moore (528 GM)
cosmetic toothpaste small 14 5 3 7¼ **1 11**
Goya (532 Goya)
perfume handbag phial 1 27 0 13 6 **4 6**
Cologne 1 oz 24 27 0 13 6 **4 6**
taleum 15 27 0 13 6 **4 6**
GP (1073 Robinson)
cotton wool .. .. 8 6 .. .. **1 0**
Halex (560 Halex)
ehamber .. F501 55 6 .. .. **6 11**
F502 44 0 .. .. **5 6**
F512 28 0 .. .. **3 6**
Heath & Heather (588 H&H)
cigarettes herbal arabian 10 9 6 2 6 **1 3**
20 16 6 4 0 **2 2**
50 33 6 8 6 **4 5**
100 62 0 15 6 **8 3**
smoking mixture herbal
plain .. .. .. 64 11 0 .. .. **1 3**
Vi-tablets 21 0 5 0 **3 0**
38 6 9 6 **5 7**
Heatherclean (588 H&H) 8 0 2 0 **1 3**
19 0 5 0 **2 10**
Hep (107 BH&L)
tonie .. .. .. 4 oz 16 4 4 1 **2 8**
8 oz 31 0 7 9 **4 10**
Herbolic (588 H&H)
disinfectant 17 0 4 0 **2 3**
Hexopal (97 Bayer)
tablets 500 mgm .. 100 41 4ea .. **62 0**
Hydrocortistab (147 Boots)
Delete soluble vial 100 mgm
Indorm (1352 Wyeth)
eapsules .. .. 10 35 3 8 10 **4 8** †s4B
100 21 8ea 5 5ea **34 4** †s4B
I.N.H. (413 Lilly)
tablets 100 mgm .. 100 3 2ea .. **4 9** TS
1000 23 6ea .. **35 3** TS
5000 bulk per 1000 22 6ea .. **33 9** TS
Delete Instant Postum (130 Bird)
Instant Postum (304 Costa)
Delete Insulin A.B. (34 A&H)
20 units .. .. 5 ee
Interlude (Greeaux (792 Malynn))
perfume .. .. trial 44 0 22 0 **7 6**
Delete Johnsons (673 J of H)
desensitizer yellow
Justso (1160 Solport) wrist straps 30 0 .. .. **3 9**
Kaloids (680 Kalium)
tablets .. .. .. 30 16 0 .. .. **2 0**
Kamillocreme (221 Camden)
16 oz 15 0ea 3 9ea **26 3**
Delete Keg (462 Field) hair cream
Kenergy (1175 SPL)
biscuit meal dog food .. 18 9 .. .. **2 0**
Kent (693 Kent)
nail brushes
wooden back NHW1 12 11ea 3 2ea **22 6**
N9 3 5ea 10ea **5 11**
ND6 2 9ea 8ea **4 9**
"Long Grip" NP19 8 4ea 2 0ea **14 6**
shaving brushes
100% badger white handle
V4 36 2ea 8 9ea **63 0**
V5 45 11ea 11 1½ea **80 0**
V6 51 8ea 12 6ea **90 0**
V7 66 0ea 16 0ea **115 0**
V8 77 6ea 18 9ea **135 0**
V10 96 5ea 23 4½ea **168 0**
V14 144 7ea 35 1ea **252 0**
blaek handle .. C23 27 3ea 6 7½ea **47 6**
C24 34 5ea 8 4ea **60 0**
C25 40 2ea 9 9ea **70 0**
C26 48 3ea 11 8ea **84 0**
C27 54 6ea 13 3ea **95 0**
50/50 badger and bristle
C19 16 4ea 4 0ea **28 6**
C21 20 1ea 4 11ea **35 0**
"Thistle" 100% badger
KS1 54 6ea 13 3ea **95 0**
90% badger and 10% bristle .. KS2 40 2ea 9 9ea **70 0**
"Traval" .. KS27 14 4ea 3 6ea **25 0**
KS28 27 3ea 6 7½ea **47 6**
Kodak (711 Kodak)
Brownie 44B camera .. 52 0ea 13 0ea **93 0**
case 935 8 8ea 2 2ea **15 6**
Kodaslide 50 projeetor 209 7½ea .. **322 6**
projeetion lamp 300w .. 23 1ea .. **33 0**
Kodachrome II double 8mm movie film 25 ft. spool 18 8ea 2 11ea **29 7**
movie films 16mm (reversal)
Tri-X and Plus-X 50 ft. spool 25 9ea 3 11ea **38 3**
50 ft. magazine 31 10½ea 5 4ea **47 10**

ANTI-BACTERIAL AND
ANTI-INFLAMMATORY OINTMENT
THE DISTILLERS COMPANY (Biochemicals) LIMITED
SALES DIVISION, LIBerty 6600, LONDON

'ZYNOTRACIN'
TRADE MARK

	100 ft. spool	43	4½ea	6	6ea	**64**	**4**		
	Kodachrome 50 ft. spool	30	0ea	5	0ea	**45**	**0**		
	50 ft. magazine	36	0ea	6	5ea	**54**	**5**		
	100 ft. spool	51	3ea	8	6ea	**76**	**10**		
	Kodisk filters 255	7	0ea	1	9ea	**12**	**3**		
	285	7	0ea	1	9ea	**12**	**3**		
	320	7	8ea	1	11ea	**13**	**5**		
	370	9	0ea	2	3ea	**15**	**9**		
	close-up lens .. 255	5	2ea	1	4ea	**9**	**1**		
	lens hoods .. 255	3	8ea		11ea	**6**	**5**		
	285	3	8ea		11ea	**6**	**5**		
	320	4	8ea	1	2ea	**8**	**2**		
	Leichner (749 Lelchner)								
	"kamera klear" base 352	14	6	7	3	**2**	**5**		
	Less (528 GM) toothpaste	14	5	3	7¼	**1**	**11**		
	Librium (1074 Roche)								
	tablets 5 mgm 25	54	0 ..		..	**6**	**9**	s4B	
	100	192	0 ..		..	**24**	**0**	s4B	
	500	65	0ea		..	**97**	**6**	s4B	
	10 mgm 25	68	0 ..		..	**8**	**6**	s4B	
	100	240	0 ..		..	**30**	**0**	s4B	
	500	82	0ea		..	**123**	**0**	s4B	
	Lifeguard (894 Nicholas)								
	disinfectant	9	3 ..		..	**1**	**0**		
	toilet roll .. 3 doz	35	11 ..		..	**1**	**3**		
	flat .. .. 3 doz	35	11 ..		..	**1**	**3**		
	Li-lo (308 Cow)								
	air cushions 15×10 in 335	46	0 ..		..	**5**	**9**		
	18×13 in 336	65	6 ..		..	**8**	**3**		
	18×14 in 383	76	0 ..		..	**9**	**6**		
	20×16 in 384	79	0 ..		..	**9**	**11**		
	air pillows 18×13 in 334	56	0 ..		..	**7**	**0**		
	19×14 in 382	76	0 ..		..	**9**	**6**		
	hot water bottles								
Delete	Berkeley								
	Grosvenor	48	6 ..		..				
	with handle ..	52	0 ..		..				
	Lip-Slik (876 MP) ..	12	0	6	0	**2**	**0**		
	Lusty's (781 Lusty's)								
	digestive tablets .. 150	33	0	7	10	**4**	**9**		
	nerve tablets 150	33	0	7	10	**4**	**9**		
	seaweed bath bags .. 5	24	0	5	8	**3**	**6**		
	and sarsaparilla tablets .. 150	33	0	7	10	**4**	**9**		
	sleep inducing tablets 150	33	0	7	10	**4**	**9**		
	special herbal tablets .. 150	33	0	7	10	**4**	**9**		
	Marevan (436 Evans)								
	tablets 1 mgm .. 100	96	0 ..		..	**12**	**0**		
	10 mgm .. 100	288	0 ..		..	**36**	**0**		
	Margo's (798 Margolis)								
	hair lacquer refill sachet	4	2	2	1	**1**	**0**		
	shave cream lather tube	11	0	2	9	**1**	**9**		
	tonic hair cream tube	9	2	4	7	**1**	**9**		
	Max (855 Mondart)								
	insect repellant ..	30	0	7	4	**3**	**11**		
	Melleril (1098 Sandoz)								
	syrup .. .. 100 mils	54	0 ..		..	**6**	**9**		
	1 lltre	444	0 ..		..	**55**	**6**		
	Mel Rose (1069 Roberts & Sheppey)								
	tablet	3	10		11		**6**		
		6	5	1	7	**1**	**0**		
Delete	all old sizes								
	Mep 4 (650 IRL)								
	tablets 400 mgm .. 50	7	3ea		..				
	100	14	0ea		..				
	250	34	0ea		..				
	500	64	0ea		..				
Delete	Metuvit (221 Camden) all products								
	Mimosept (347 Dalmas)								
	sanitary towels .. 12	23	0 ..		..	**2**	**6**		
	belts	25	0	1	3	**2**	**11**		
	Miners (876 MP)								
	hair lacquer aerosol ..	39	0	19	6	**6**	**6**		
	hair lacquer	15	0	7	6	**2**	**6**		
	Mus-Gar (588 H&H) ointment	16	6	4	0	**2**	**5**		
		32	6	8	0	**4**	**9**		
	Mycil (179 BDH)								
	spray pressurised pack	56	0		..	**7**	**0**		
	Nair (1003 PP) cream ..	26	8	13	4	**4**	**3**		
	Navidrex K (262CIBA)								
	tablets 25	32	0 ..		..	**4**	**0**		
	100	112	0 ..		..	**14**	**0**		
	500	44	0ea		..	**66**	**0**		
Delete	Neron (648 IH)								
	Neron (1274 VDL)								
Delete	Nicolane (70 Aspro) linctus								
Delete	Nicrazin (837 MSD) 2½ lb								
	Nobepyrol (436 Evans)								
	spray pack .. 45 gm	6	6ea	1	7½ea	**11**	**4½**		
	remover cream 50 gm	4	0ea		..	**6**	**0**		
	Nohaesa (221 Camden)								
	ointment .. 16 oz	140	0	35	0	**20**	**5**	†s1	

	Nuit de Longchamp (Lubin (1 Abbey)								
	Cologne concentree .. 289	..	..	..		**16**	**6**		
	290	..	..	..		**30**	**0**		
	292	..	..	..		**75**	**0**		
Delete	297	..	..	..					
	perfume 2949	..	..	..		**35**	**0**		
	2950	..	..	..		**52**	**6**		
	2951	..	..	..		**85**	**0**		
	2952	..	..	..		**135**	**0**		
	2954	..	..	..		**300**	**0**		
	2921	..	..	..		**294**	**0**		
Delete	2948	..	..	..					
	soap (3) 2916	..	..	..		**15**	**0**		
	talcum tin 831T	..	..	..		**7**	**6**		
	bottle 830	..	..	..		**10**	**6**		
	Nulon (1037 Reckitt)								
	hand cream C	10	10	5	3½	**1**	**8**		
	Odol (314 Cranbux) toothpaste	14	5	3	7¼	**1**	**11**		
	One Two (621 Horlicks)								
	spot lifter spray .. 2 oz	31	6 ..		..	**3**	**6**		
Delete	Opoidine (787 Macfarlan) all preparations								
	Orapen V-K (650 IRL)								
	tablets 125 mgm .. 50	19	6ea		..	**26**	**0**	TS	
	100	35	0ea		..	**46**	**8**	TS	
	250	89	9ea		..	**119**	**8**	TS	
	500	171	0ea		..	**228**	**0**	TS	
	tablets 250 mgm 50	39	0ea		..	**52**	**0**	TS	
	100	69	0ea		..	**92**	**0**	TS	
	250	171	0ea		..	**228**	**0**	TS	
	500	338	0ea		..	**450**	**8**	TS	
	1000	583	0ea		..	**777**	**4**	TS	
	Ornimed (718 LAB)								
	bird seeds								
	with chloramphenicol	36	0 ..		..	**4**	**0**		
	with penicillin	36	0 ..		..	**4**	**0**		
	with sulphonamide	36	0 ..		..	**4**	**0**		
	with vit. B12	45	0 ..		..	**5**	**0**		
	Ornivite (718 LAB)								
	vitamin bird seed ..	..	..	..		**2**	**6**		
	Outdoor Girl (876 MP)								
	dry skin cream ..	9	0	4	6	**1**	**6**		
	eyebrow pencil ..	7	6	3	9	**1**	**3**		
	lipstick	7	6	3	9	**1**	**3**		
	mascara cream ..	10	6	5	3	**1**	**9**		
	rouge dry	9	0	4	6	**1**	**6**		
	vanishing cream ..	9	0	4	6	**1**	**6**		
	Parke-Davis (938 PD)								
	shaving cream tube 1½ oz								
Delete	Parmacetyl (411 EGH)								
	Parmacetyl (894 Nicholas)								
	tablets 100	12	6ea	3	1½ea				
	Pen (267 C&A)								
	acriflavine and Clearsight	10	0 ..		..	**1**	**3**		
	iodine and mosquito ..	10	0	2	6	**1**	**6**		
	Penicillin (34 A&H)								
	ointment .. .. 2 oz	18	0 ..		..	**2**	**3**	TS	
Delete	eye ointment strong								
Delete	solution tablets buffered								
	Petron (1201 Supervlte)								
	universal atomlzer ..	23	6	11	9	**3**	**11**		
Delete	Phedros (837 MSD) all sizes								
Delete	Phenaglate (70 Aspro) capsules								
	Philishave (977 PE)								
	standard volt model ..	74	6ea	18	2ea	**117**	**6**		
Delete	Pholcodine (787 Macfarlan) linctus all sizes								
	Photocrescenta (977 PE)								
	enlarger lamps ..75W	31	6	7	6	**4**	**1½**		
	150W	39	9	9	0	**5**	**2**		
	Photolita (977 PE)								
	photoflood lamps No. 1								
	275W	27	0 ..		..	**3**	**0**		
	No. 2								
	500W	67	6 ..		..	**7**	**6**		
	reflector type SM ..	112	6 ..		..	**12**	**6**		
	Plastabook (1247 TDC)								
	first aid dressings 2½ doz	38	4 ..		..	**1**	**11**		
	P.L.J. (103 BF) large ..	44	5 ..		..	**4**	**9**		
	Polkris (839 MGS)								
	electric feeding bottle	20	0ea	5	0ea	**35**	**0**		
	Portia (1160 Solport)								
	pumice stone	4	0	2	0		**8**		
	Potter & Moore (994 P&M)								
	talcum powder puffer 191	27	0	13	6	**4**	**6**		
	Predsol (518 Glaxo)								
	lotion aerosol 0·125%								
	30 mils	8	6ea		..	**11**	**4**	TS	
	Predsol-N (518 Glaxo)								
	lotion aerosol 0·125%								
	30 mils	9	0ea		..	**12**	**0**	TS	

MEGGEZONES
FOR COUGHS, COLDS AND CATARRH
dex PASTILETS
THE MODERN COUGH TREATMENT
MEGGESON
DYSPEPSIA TABLETS
THE BRAND LEADERS IN THEIR FIELDS
MEGGESON & CO. LTD., LONDON S.E.16

Primaquine (649 ICI)
tablets .. .. .. 30 32 0 .. .. **4 0**
1000 640 0 .. .. **80 0**

Primolut i.v. (1107 SAGB)
(distributors 973 Pharmethicals)
ampoules 1 mil .. 1 5 2ea .. **7 9**

Delete Prothricin (837 MSD) 1 oz

Punch and Judy (528 GM)
toothpaste 14 5 3 7¼ **1 11**

Quelques Fleurs (Houbigant (1 Abbey)
Delete perfume .. 104·91 .. .. ..

	pack No. 10		27	6	6	10½	**4**	**6**	
	containers for 30 used blades		15	6	3	10½			
	containers for 60 used blades		18	6	4	7½			
	razor sets								
	"Pilot" ..	No. 1	12	6	3	1½	**3**	**6**	
	"Service" ..	No. 2	16	6	4	1½	**4**	**6**	
	"Rugby" ..	No. 3	37	6	9	4½	**7**	**6**	
	"Devon" ..	No. 4	67	6	16	10½	**12**	**6**	
	"Rugby de-luxe"	No. 5	67	6	16	10½	**12**	**6**	
	"Devon de-luxe"	No. 6	9	0ea	2	3ea	**17**	**6**	
	"Travellers de-luxe"	No. 7	10	6ea	3	0ea	**22**	**6**	
	"Zip" ..	No. 8	12	6ea	3	0ea	**25**	**0**	
	dressiug case	No. 9	18	6ea	5	0ea	**35**	**0**	
		No. 10	18	6ea	5	0ea	**35**	**0**	
	Wata (980 Photopia)								
	optical viewfinder ..	W39	20	10ea	5	0ea	**36**	**3**	
	Watameter (980 Photopia)								
	11 rangefinder ..	W2	39	10ea	9	9ea	**69**	**6**	
	super	W3	64	0ea	10	6ea	**74**	**6**	
	Weet Meet (1175 SPL)								
	No. 1		10	2 ..	..		**1**	**1**	
	No. 2		10	2 ..	..		**1**	**1**	
	Wellcome (208 BW)								
	ergometrine maleate								
	0·5 mgm in 1cc ..	10	62	0 ..	..		**7**	**9**	†s1
		100	464	0 ..	..		**58**	**0**	†s1
	pasteurella antiserum (vet)								
		100 cc	40	0 ..	..		**60**	**0**	
Delete	tetanus toxoid (vet)	10 cc							
Delete	toilet lanolin ..	.. 1 oz							
	Whip (933 PLG)								
	after shave lotion ..		6	10ea	3	5ea	**14**	**3**	
			18	0ea	9	0ea	**39**	**8**	
	Wopsey (107 BH&L)								
	wasp killer		16	0 ..	..		**2**	**3**	
	Wright-Fleming (1393 BRL)								
	antigens								
	diphtheria-pertussis								
	prophylaetic	3 × ½ mil	4	3ea	..		..		
		5 mils	7	6ea	..		..		
	diphtheria-tetanus								
	prophylactic	½ mil	1	10½ea	..		..		
		3 × ½ mil	3	4½ea	..		..		
		5 mils	7	10½ea	..		..		
	pertussis ..	½ mil	1	10½ea	..		..		
		3 × ½ mil	4	3ea	..		..		
		5 mils	7	6ea	..		..		
	tetanus toxoid	2 × ½ mil	3	9ea	..		..		
		5 mils	7	1½ea	..		..		

AMENDMENTS TO KEY TO SUPPLIERS:

(128 Biometica)=BIOMETICA, LTD., Barnet By Pass, Boreham Wood, Herts. Elstree 1721.
(158 B&B)=BRADDOCK & BAGSHAW, LTD., 340 Manehester Street, Oldham, Lancs. Main 4905.
193 Brobat)=BROBAT, LTD., 52 Wandle Bank, London, S.W.19. Liberty 8131.
304 Costa)=G. COSTA & CO., LTD., Staffordshire Street, London, S.E.15. New Cross 3456.
514 Gillette)=GILLETTE SAFETY RAZOR CO. (DIVISION OF GILLETTE INDUSTRIES LTD.), Great West Road, Isleworth, Middlesex. Isleworth 1234.
565 Hanimex)=HANIMEX (U.K.), LTD., 42 Lower Marsh, London, S.E.1.
839 MGS)=MILLER GWYNNE SALES, LTD., 112a Junction Road, London, N.19. Archway 0199.
931 PDC)=PAND DISTRIBUTORS CO., LTD., P.O. Box No. 1., Oxted, Surrey.
943 Pathescope)=PATHESCOPE (LONDON), LTD., 38 Brooke Street, London, E.C.1. Holborn 0461.
984 Pinaud)=PINAUD, LTD., Barnet By Pass, Boreham Wood, Herts. Elstree 1721.
1157 Stephens)=HENRY C. STEPHENS, LTD., Gillespie Road, London, N.5. Canonbury 4455.
1274 VDL)="V" DEVELOPMENT LTD., 22 Clifton Road, London, W.9. Cunningham 0701.
1412) Jaekel)=JACKEL & CO., LTD., 247a, St. Vincent Street, Glasgow, C.2. Cit 6661.

THIS WEEK'S CHANGES

NEW and altered entries notified for the first time.
A=Advanced. *R*=Reduced.
Entries new this week are marked thus:— ●

	Actina (8 Aetina)								
A	lens hood alloy	22–42 mm	2	10ea		Sea	**4**	**11**	
	Adcortyl-A (1176 Squibb)								
●	ophthalmic ointment	3·5 gm	4	6ea	..		**6**	**9**	TS
●	with **Graneodin**	3·5 gm	5	0ea	..		**7**	**6**	TS
●	**All Day** (451 F&J) deodorant stick ..		15	0	7	6	**2**	**6**	
	Andre Philippe (48 AP)								
R	bath cubes six	16	9	0	4	6	**1**	**6**	
Corr.	Antrypol BP (649ICI) not BPC								
Corr.	**Bemaco** (142 BML)								
	tablets 10 ..		23	4	5	8	**3**	**5**	
	dp 25 ..		51	3 ..	..		..		
	dp 100 ..		120	0 ..	..		..		
	dp 1000 ..		80	0ea	..		..		
	Bemasulph (142 BML)								
Corr.	tablets 25		45	0 ..	..		**5**	**7½**	
●	**Black Opal** (1063 Rimmel)								
	cleansing milk ..		27	0	13	6	**4**	**6**	
	cold cream		27	0	13	6	**4**	**6**	
	Cologne		39	0	19	6	**6**	**6**	
	deodorant roll-on ..		27	0	13	6	**4**	**6**	
	spray ..		33	0	16	6	**5**	**6**	
	face powder		27	0	13	6	**4**	**6**	
	compressed		27	0	13	6	**4**	**6**	
	hand cream		27	0	13	6	**4**	**6**	
	lipstick		27	0	13	6	**4**	**6**	
	liquid liner		27	0	13	6	**4**	**6**	
	liquid make-up ..		27	0	13	6	**4**	**6**	
	mascarola		33	0	16	6	**5**	**6**	
	moisturising film ..		27	0	13	6	**4**	**6**	
	nail lacquer		27	0	13	6	**4**	**6**	
	pearlised		33	0	16	6	**5**	**6**	
	perfume		39	0	19	6	**6**	**6**	
	shadow stick		27	0	13	6	**4**	**6**	
	skin food with vitamins		33	0	16	6	**5**	**6**	
	talcum		33	0	16	6	**5**	**6**	
	toning lotion		27	0	13	6	**4**	**6**	
	vanity case		75	0	37	6	**12**	**6**	
	Bourjois (150 Bourjois)								
●	baby soap (3) ..	..9169	17	4	4	4	**2**	**6**	
Delete	Bronchovydrin (802 Martindale)	½ oz							
A	**Cataline** (1101 Sangers) ..		40	0	10	0	**5**	**3**	
A	**Cecil Wood** (1345 CW)								
	chest and lung mixture		16	6	4	1½	**2**	**3**	
	head powders	16	25	0	6	3	**3**	**3**	
	influenza powders ..	9	15	0	3	9	**2**	**0**	
		25	39	0	9	9	**4**	**10**	
●	**Cremalgin** (1320 WP) ..	2 oz	37	6	9	4½	**5**	**6**	
Delete	Cynomel (1153 SKF) 25 mcgm 100								
●	**Delaminoph** (142 BML)								
	tablets 25		30	0 ..	..		..		
	100		100	0 ..	..		..		
	500		33	0ea	..		..		
●	**Delamised** (142 BML)								
	tablets 25		32	0 ..	..		..		†s4A
	100		108	0 ..	..		..		†s4A
	500		35	0ea	..		..		†s4A
	Elimix (649 ICI) vet								
Delete	tin 1 lb								
	tin		720	0 ..	..		**90**	**0**	
	Etisul (649 ICI)								
Delete	cream 5 gm								
	cream		32	0 ..	..		**4**	**0**	
	Etisul T (649 ICI)								
Delete	cream 5 gm								
	cream		32	0 ..	..		**4**	**0**	
Delete	Eulagen (770 LP) pills 50								
	Fields (462 Field)								
Delete	brushless shave		14	5	3	7¼	**2**	**1**	
Delete	Fresh Magic (876 MP) spray refill								
	Gammexane (649 ICI)								
●	insect powder sifter ..	1 lb	24	0 ..	..		**3**	**0**	
	tin ..	7 lb	160	0 ..	..		**8**	**0**	
	Heinz (593 Heinz) junior foods								
●	orange and apricot dessert		6	11 ..	..			**8½**	
	Hibitane (649 ICI)								
Corr.	antiseptic cream 500 gm		144	0 ..	..		**18**	**0**	
Delete	Hudnut (631 Hudnut) creme rinse 1979								
	I.C.I. (649 ICI)								
Delete	aerosol insect spray, all sizes								
	Icipen V (649 ICI)								
Delete	oral suspension, all sizes								
Delete	Iodised Balmosa (912O) 2 oz								
	Jane Seymour (665 JS)								
●	wonder lipstick ..		9	0	4	6	**1**	**6**	
	Klik (563 Hampshire)								
R	aerosols		33	4 ..	..		**3**	**9**	
	Lil-lets (761 Lilia-White)								
●	normal	20	31	0 ..	..		**3**	**3**	
Delete	Liver injectilon USP (746 Lederle) 3								
●	**Lofenalac** (826 MJ) ·phenylketonuria diet	2½ lb	680	0 ..	..		**81**	**0**	
	Lorexane (649 ICI)								
Delete	ear lotion (vet.)								
Delete	Magic Touch (876 MP)								
	Mavala (1093 JS&C) (distributors 802 Martindale)								

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The minute-a-day Denture Cleaner in the flow-brush 'squeeze' pack. Retails at 2/9d. Refill 2/5d.
The liquid Denture Cleaner for modern dentures.
A EUCRYL FAMILY PRODUCT

●	base coat		108	0	52	6	**18**	**0**	
●	cuticle cream		108	0	52	6	**18**	**0**	
●	coffret		27	6ea	13	5ea	**55**	**0**	
Corr.	scientifique		126	0	61	6	**21**	**0**	
	Max (855 Mondart)								
R	air freshener		26	3 ..		..	**2**	**11**	
			31	6 ..		..	**3**	**6**	
			44	3 ..		..	**4**	**11**	
R	fly killer		26	3 ..		..	**2**	**11**	
			31	6 ..		..	**3**	**6**	
			44	3 ..		..	**4**	**11**	
R	moth proofer		26	3 ..		..	**2**	**11**	
			31	6 ..		..	**3**	**6**	
			44	3 ..		..	**4**	**11**	
●	**Millionairess** (1 Abbey)								
	beauty cream	1 oz	21	0ea	10	6ea	**42**	**0**	
Delete	Movex (16 Agfa) 88L cine camera								
	Mysoline (649 ICI)								
Corr.	delete poison schedules								
A	**Natusol** (695 TK)								
	baby cream 35 gm ..		20	0	5	0	**2**	**9**	
	Nescafe (883 Nestle)								
R	decaffeinated $1\frac{3}{4}$ oz ..		36	11 ..		..	**3**	**6**	
	Nulacin (621 Horlicks)								
●	tablets	25	24	0	6	0	**3**	**6**	
R	**Pabracort** (930 P&B)								
	capsules	10	76	0 ..		..	**9**	**6**	
		25	174	0 ..		..	**21**	**9**	
		100	646	0 ..		..	**80**	**9**	
	insufflation outfit ..		118	0 ..		..	**14**	**9**	
R	**Panok** (142 BML)								
	tablets	12	14	8 ..		..	**1**	**10**	
		100	72	0 ..		..	**9**	**0**	
		500	24	0ea		..	..		
		1000	46	0ea		..	..		
	Penicillin G (649 ICI)								
Delete	ointment	1 oz							
Delete	eye 2000 units /gm	1 dr							
	Pifco (983 Pifco)								
R	"Popular" shaver 1126		39	11ea	9	9ea	**63**	**0**	
	Pinaud (984 Pinaud)								
R	"Set-up" pre-shave lotion 120		30	0	15	0	**5**	**0**	
	Pretty Quick (1240 Tokalon)								
●	face powder		15	0	7	6	**2**	**6**	
Delete	Pronel (451 F&J) ..		154	0	38	6	**22**	**6**	
	Red Heart (864 JM)								
A	dog food small 4 doz ..		33	0 ..		..		**10**$\frac{1}{2}$	
	large 2 doz ..		30	0 ..		..	**1**	**7**	
	Remington (1044 RR)								
R	shaver auto-home ..						**175**	**0**	
	Savlon (649 ICI)								
Corr.	barrier cream 50 gm ..		17	0	4	3	**2**	**11**	
●	**Sedasma** (142 BML)								
	tablets	25	34	0 ..		..			†s4A
		100	110	0 ..		..			†s4A
		500	37	0ea		..			†s4A
	Signal (509 Gibbs)								
●	tooth-paste		30	9	7	6	**4**	**1**	
Delete	Snowfire (563 Hampshire) shampoo								
A	**Solida Record** (637 Hunter)								
	camera		59	0ea	14	4ea	**102**	**10**	
	E.R. case ..		16	8ea	4	1ea	**29**	**1**	
●	**Soluvone** (378 DCBL)								
	injection 5×1 mega..		8	9ea		..	**13**	**1**$\frac{1}{2}$	TS
	10×5 mega ..		66	8ea		..	**100**	**0**	TS
	Spillers (1172 Spillers)								
A	shapes		10	8 ..		..	**1**	**1**	
A	Winalot meal		10	8 ..		..	**1**	**1**	
●	Wagalot		10	0 ..		..	**1**	**1**	
			17	9 ..		..	**1**	**11**	
Delete	Spontex (1174 Sponcel) cosmetic sponge								
●	**Spraydex** (294 Copydex)								
	garden spray bottle ..	8 oz	23	6 ..		..	**2**	**11**	
	refill ..	8 oz	15	0 ..		..	**1**	**11**	
	mothproofer bottle ..	8 oz	39	0 ..		..	**4**	**11**	
	refill ..	8 oz	31	0 ..		..	**3**	**11**	
	Stevo (8 Actina) cine screen								
R	white 40×40		48	4ea		..	**72**	**6**	
R	40×48		59	8ea		..	**89**	**6**	
●	48×48		70	0ea		..	**105**	**0**	
●	60×60		106	4ea		..	**159**	**6**	
●	beaded 24×18 ..		33	0ea		..	**49**	**6**	
R	32×24 ..		41	8ea		..	**62**	**6**	
●	32×32 ..		45	8ea		..	**68**	**6**	
R	40×40 ..		59	8ea		..	**89**	**6**	
●	48×40 ..		66	4ea		..	**99**	**6**	
R	48×48 ..		79	8ea		..	**119**	**6**	
●	60×60 ..		131	8ea		..	**197**	**6**	
	Sulphanilamide (649 ICI)								
Delete	BP sterilised 5 gm 10×100								
	Tretamine (649 ICI)								
●	ampoules 20 mgm ..	5	800	0 ..		..	**100**	**0**	†s1s4A
	Zom (312AC)								
A	ointment		11	0	2	9			

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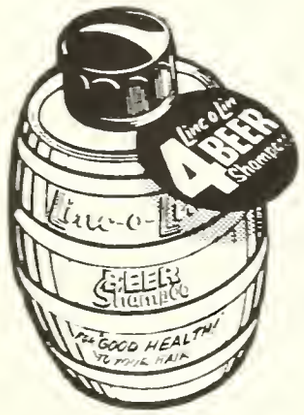
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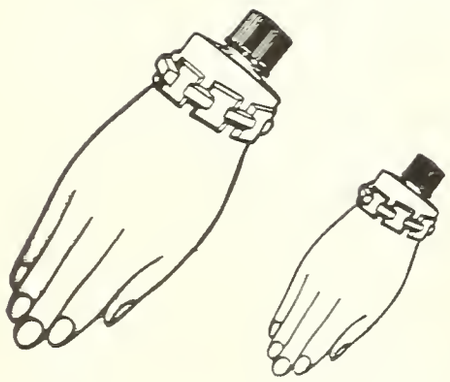
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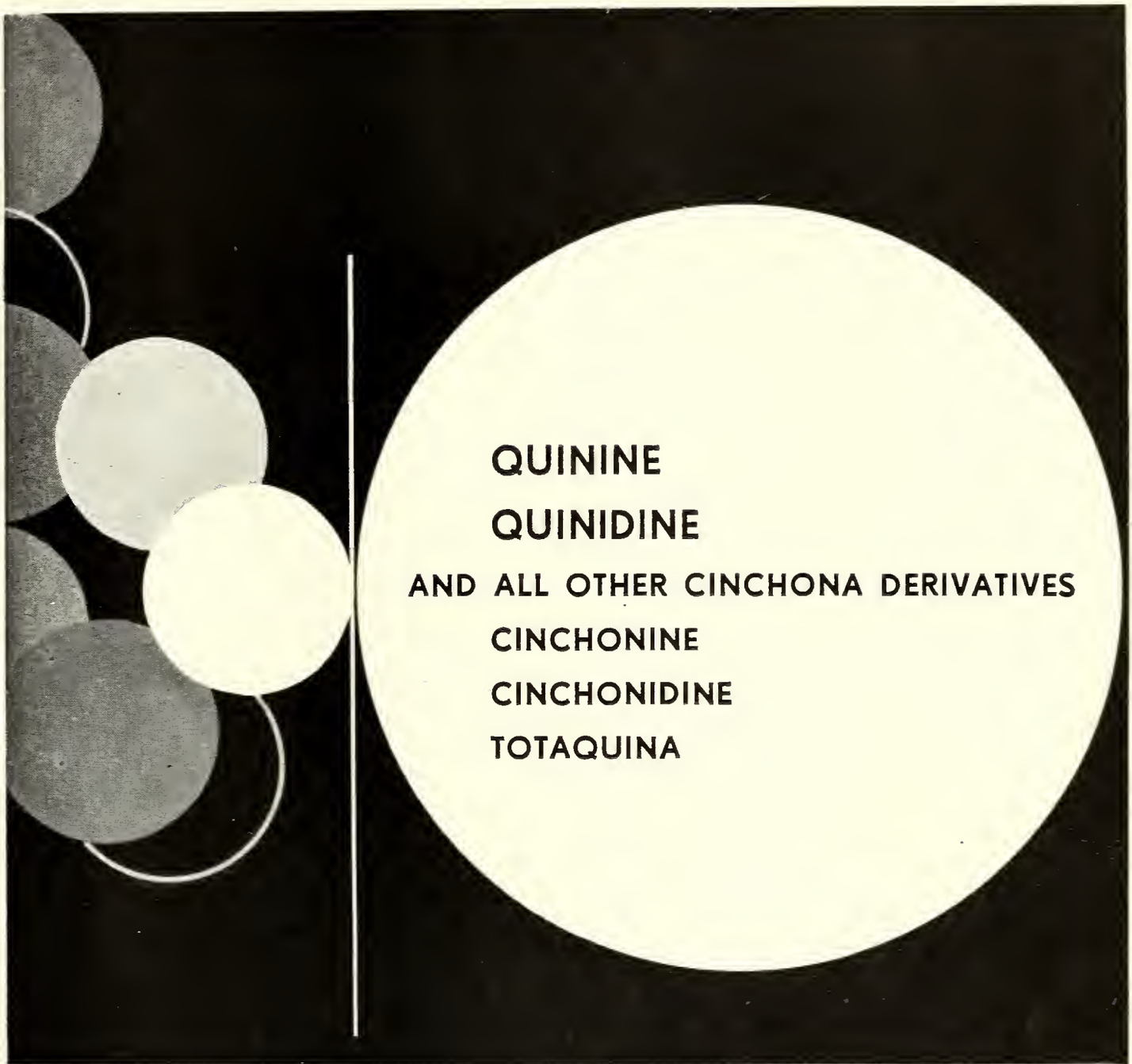
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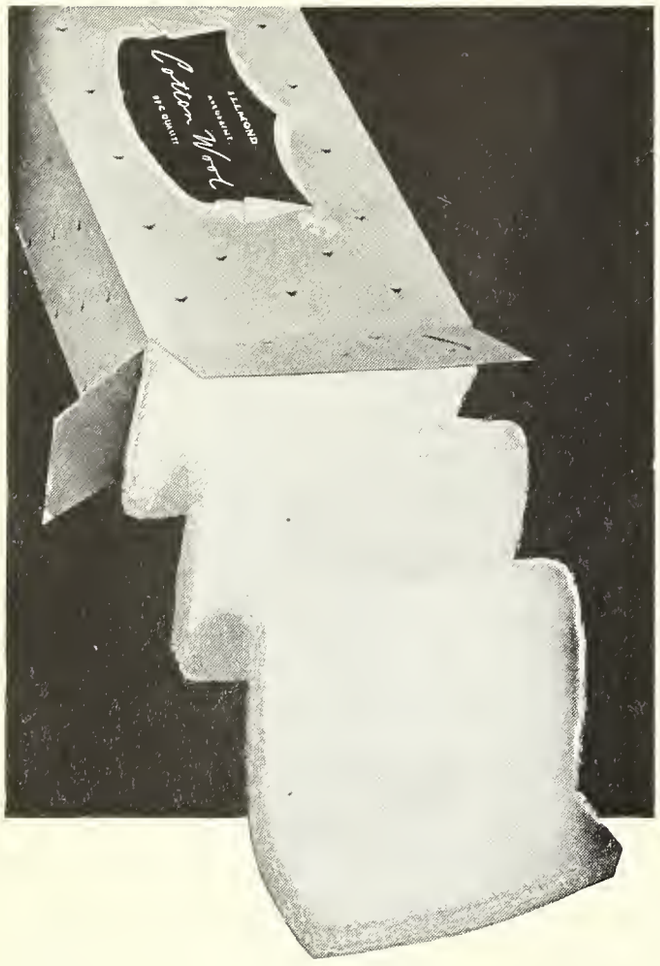
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INDEX TO ADVERTISERS

A.E.I. Lamp & Lighting Co., Ltd. 21
Agroexport 58
Allen & Hanburys, Ltd. .....Cover iii
Allen, Stafford, & Sons, Ltd. 17
André Philippe, Ltd. 31
Antoine Chiris, Ltd. 58
Ashwood Timber Industries, Ltd. 82
Ayrton, Saunders & Co., Ltd. 42

B. & P. Laboratories, Ltd. 49
Barker, Robert, & Son, Ltd. 74
Barnett & Foster, Ltd. 32
Bayer Products, Ltd. .....Price List Sup. Page 4
Beatson, Clark & Co., Ltd. 19
Bell, John, Hills & Lucas, Ltd. 34
Biometica, Ltd. (Lemon Delph Freshener) 88
Blackie, Robert, Ltd. 46
Blackwood, James, & Co., Ltd. 74
Blythe, William, & Co., Ltd. 46
Boots Pure Drug Co., Ltd. 14
British Dyewood Co., Ltd., The 75
British Felsol Co., Ltd. .....Cover iv
British Railways (Eastern Region) 81
Brook, Parker & Co., Ltd. 81
Brown, N. C., Ltd. 88
Brumleu, Wm. Chas., Ltd. 80
Burrough, James, Ltd. 4
Burroughs Wellcome & Co. ....Price List Sup. Page 1
Bush, W. J., & Co., Ltd. 57

Cartwright, W. B., Ltd. 41
C.D. Indicator Advisory Bureau 32
Chemists' Mutual Insurance Co., Ltd., The 44
Colby Products, Ltd. 82
Cox, Arthur H., & Co., Ltd. 39
Cresswell Bros., Sponges 80
Cuxson, Gerrard & Co., Ltd. 70

Daniel, Richard, & Son, Ltd. 42
Davenport, J. T., Ltd. 82
Devon Cold Wave Co., Ltd. (Comfy Curlers)..... 61

(continued overleaf)

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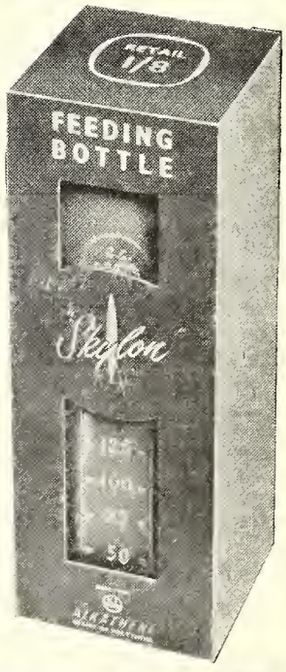
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INDEX (cont.)

Distillers Co. (Biochemicals), Ltd. Price List Sup. Page 2
Distillers Co. (Biochemicals), Ltd., The 30
Distillers Co., Ltd., The (Chemical Division) 37
Domestos, Ltd. 87
dott Inverni & Della Beffa S.p.A. 20

Eucryl, Ltd. .....Price List Sup. Page 5

Fallowfield, Jonathan, Ltd. 16
Fassett & Johnson, Ltd. ..... Centre Spread, 66 & 67
Fibrenyle, Ltd. 5
Frischmann, H. 30
Fulford, C. E., Ltd. (Vitapointe) 6

Gardiners, Ltd. 32
Geigy Pharmaceutical Co., Ltd. 15
General Paper & Box Manufacturing Co., Ltd. 28
George, Ernest J., & Co. .....Classified Section
Gerhardt-Penick, Ltd. 29
Glass Manufacturers' Federation, The ..... Interleaved Edit., 65
Glaxo Laboratories, Ltd. .....Interleaved Edit., 682
Glover, Thos., & Son, Ltd. 4
Golden, Ltd. (Ambre Solaire) 89
Golden, Ltd. (Colour Match) 18
Goodman, George, Ltd. 72
Goya, Ltd. 53
Graesser Salicylates, Ltd. 80
Graesser-Thomas, H. W., Ltd. 78
Grecff, R. W., & Co., Ltd. 3

Haetam, Ltd. .....Classified Section
Harley, Thomas, Ltd. 4
Hedges (Chemists), Ltd. 28
Heinz, H. J., Co., Ltd. 7
Hooper, B., & Co., Ltd. 52
Horlicks, Ltd. (Nonocal 900) 12, 13
Hunter, R. F., Ltd. 71
Hygienic Drinking Straws, Ltd. 69

Illingworth, E., & Co., Ltd. 4

(*continued on page* 8)

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Vitapointe still gives you a handsome profit! And this year, our advertising is greater than ever before. So place your order now. Link up with counter and window displays during this peak selling time for Vitapointe.

Baby Department lifts Heinz Baby Foods sales 25%



This self-selection Baby Department was installed by Messrs. Mills & Mills of Keynsham, in Somerset. Look at the results they report during its first six months in use . . .

★ **15-20% increase in turnover on baby items.**

★ **25% increase on the sale of Heinz Baby Foods.**

★ **Higher rate of impulse buying because of convenient arrangement for customers.**

★ **Saving in staff time—in attending to customers.**

★ **Less time filling fixtures—stock displayed in ratio to sales.**

You can do all these things with a Baby Department!

Ask your Heinz salesman to help you install one.

INDEX (cont.)

International Bottle Co., Ltd., The 85

Kalium Products (Redditch), Ltd. 4
Kay Brothers, Ltd. 70
Kobler 30

Lake & Cruickshank, Ltd. 55
Lastonet Products, Ltd. 43
Laughton & Son, Ltd. 16
Lax & Shaw, Ltd. 36
Lederle Laboratories, Ltd. 9
Levene, William, Ltd. 70
Lilly, Eli, & Co., Ltd. .....Front Cover
Lincoln Chemicals, Ltd. 2
Lofthouse & Saltmer, Ltd. 10
Lord, Cyril, Ltd. (Mimosept) 45

Macandrews & Forbes, Ltd. 72
Macarthys (Wholesale Chemists), Ltd. 62
Macfarlan Smith, Ltd. 33
Manesty Machines, Ltd. 59
Mawson & Proctor Pharmaceuticals, Ltd. 79
May & Baker, Ltd. 22, 23
Medexport Smolenskaja-Sennaja 83
Medico-Biological Laboratories, Ltd. 76
Meggeson & Co., Ltd. 47
Meggeson & Co., Ltd. .....Price List Sup. Page 3
Millner, R. (Chemist Sundries), Ltd. Price List Sup. Page 6
Monil, Ltd. 38
Mysore, Trade Agent for 80

National Glass Works (York), Ltd. .....Cover ii
New Croydon Rubber Co. 56
Northern Polytechnic, The 82

Organon Laboratories, Ltd. 64
Or-Lem, Ltd. 26
Orridge & Co. .....Classified Section

Parke, Davis & Co. .....Interleaved Edit., 68
Pharmaceutical Products, Ltd. .. Centre Spread 66 & 67
Plastic Box Co., Ltd., The 10
Powell Duffryn (Carbon Products), Ltd. 27
Proprietary Articles Trade Association, The 44
Purkis, Williams, Ltd. 60

Rapidol, Ltd. (Inecto) 60
Regna Cash Register Co. 35
Remploy, Ltd. 48
Rendell, W. J., Ltd. .....Interleaved Edit., 681
Riddell Products, Ltd. 54
Robinson Bros. Cork Growers, Ltd. 88
Robinson & Sons, Ltd. (Paddi-Pads) 69
Robinson & Sons, Ltd. (Chesterfield) 24
Rochdale Metal Products 31

Sangers, Ltd. 51
Scientific Pharmacals, Ltd. 61
Shadeine Co., Ltd., The 74
Silber, J. J., Ltd. 73
Simpkin, A. L., & Co., Ltd. 26
Smith & Hill (Chemists), Ltd. 88
Stafford-Miller, Ltd. 82
Suter. A. F., & Co., Ltd. 60

Thirsk Equipment Co., Ltd. 78
Thompson & Capper, Ltd. 11
Thornton & Ross, Ltd. 83
Tidman & Son, Ltd. 72

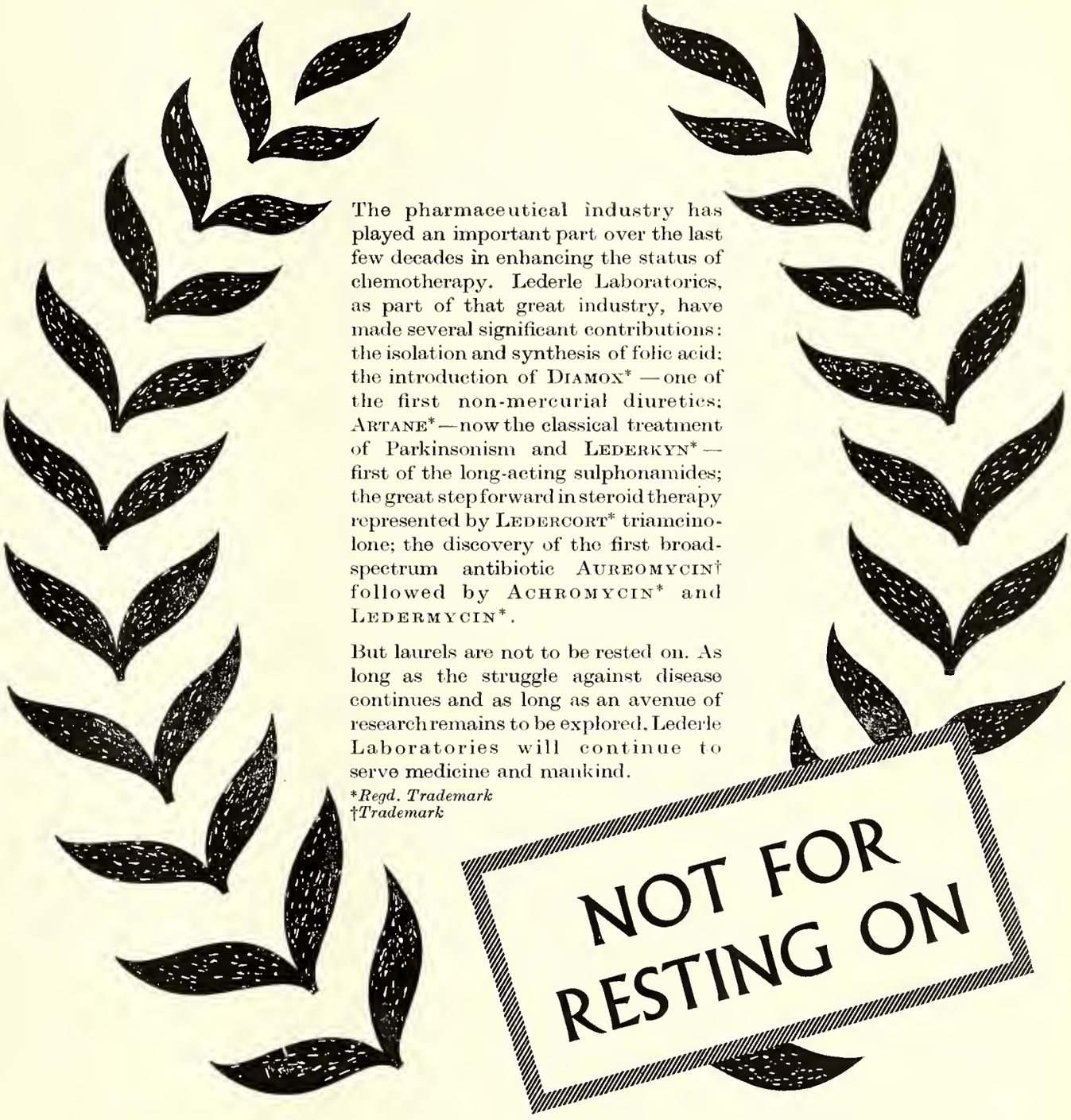
Unichem, Ltd. 40

V-Development, Ltd. 72
Vitamins, Ltd. 56
Vitamins, Ltd. 1

Washington Chemical Co., Ltd., The 77
Whitaker & Co. (Kendal), Ltd. 72
White, Jacob, & Co., Ltd. 58
Woolley. James, Sons & Co., Ltd. 25

Zeal, G. H., Ltd. 50

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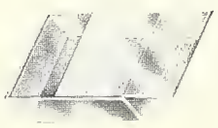
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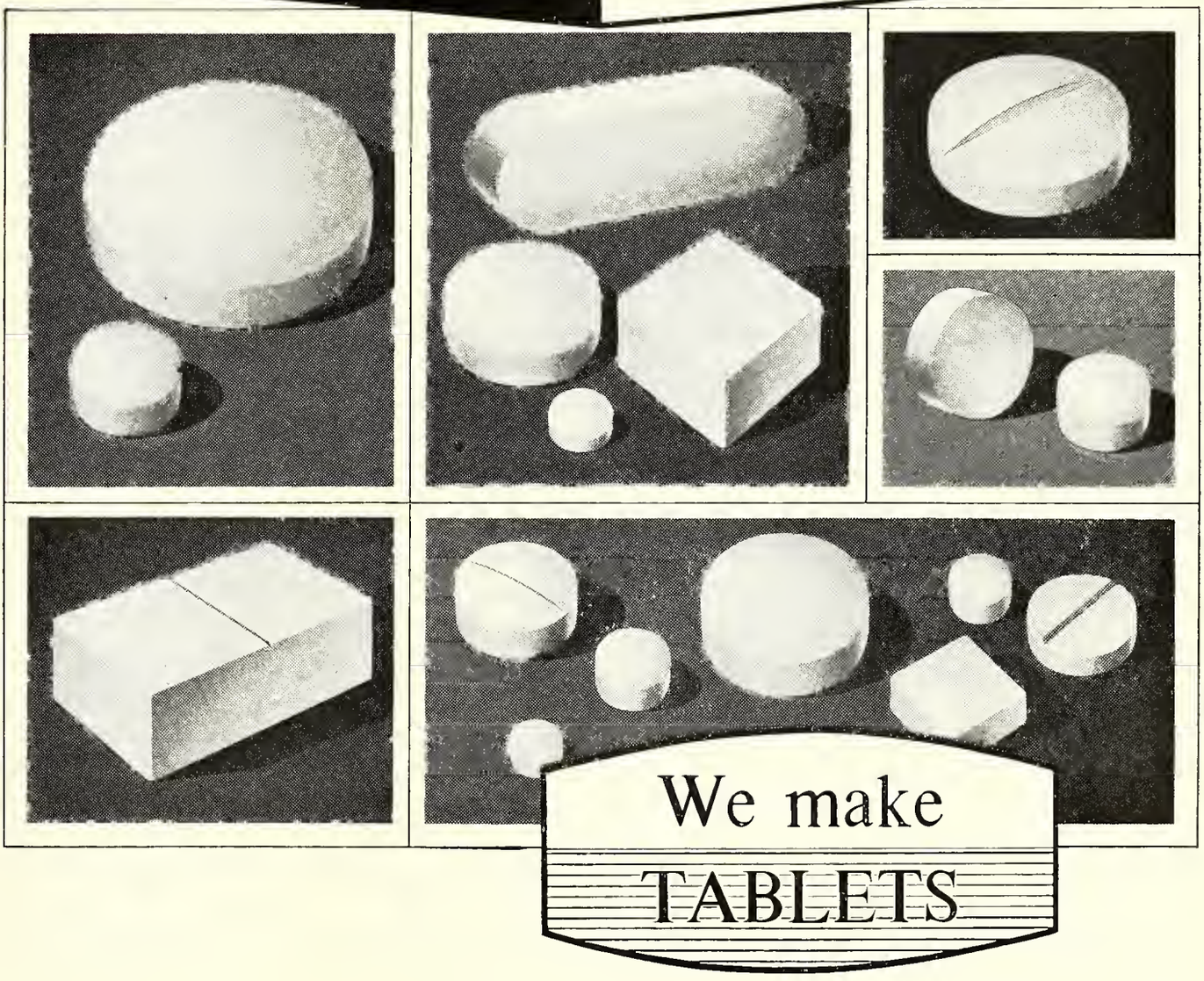


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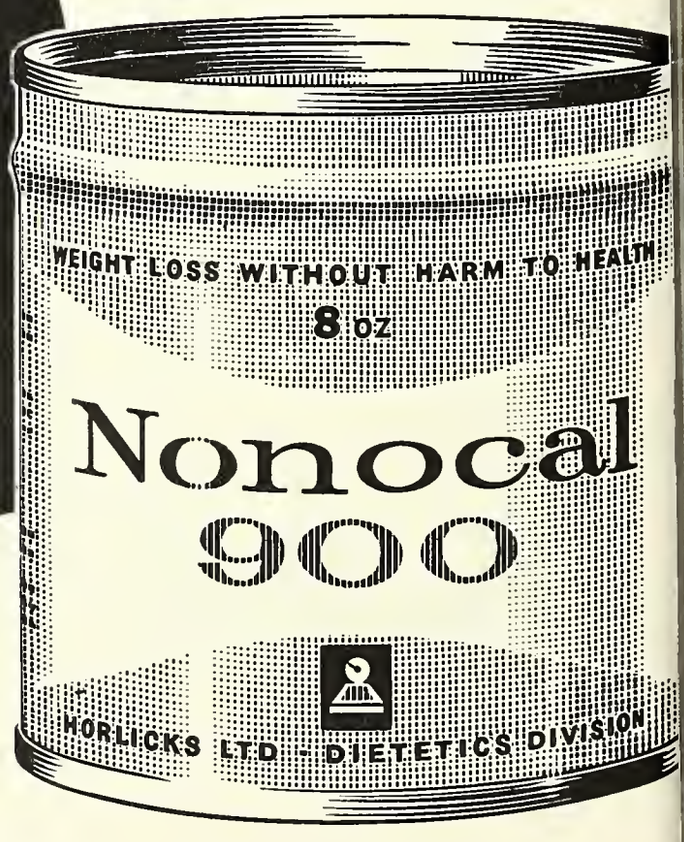
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Nonocal 900



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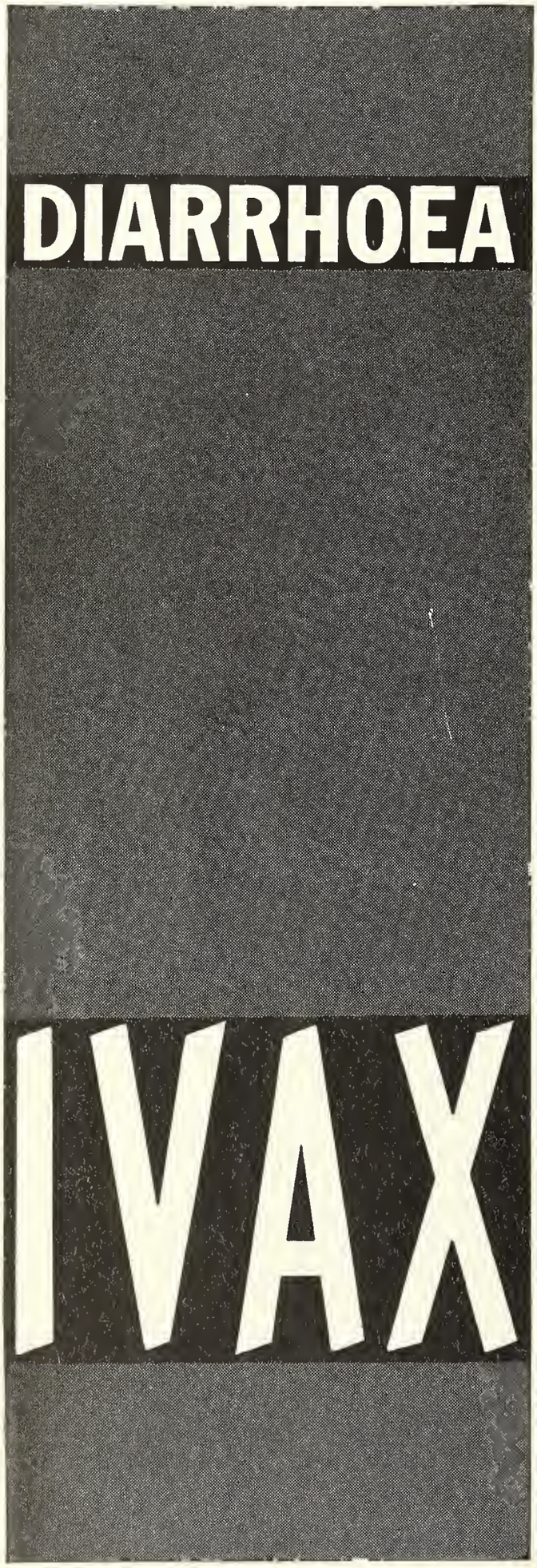


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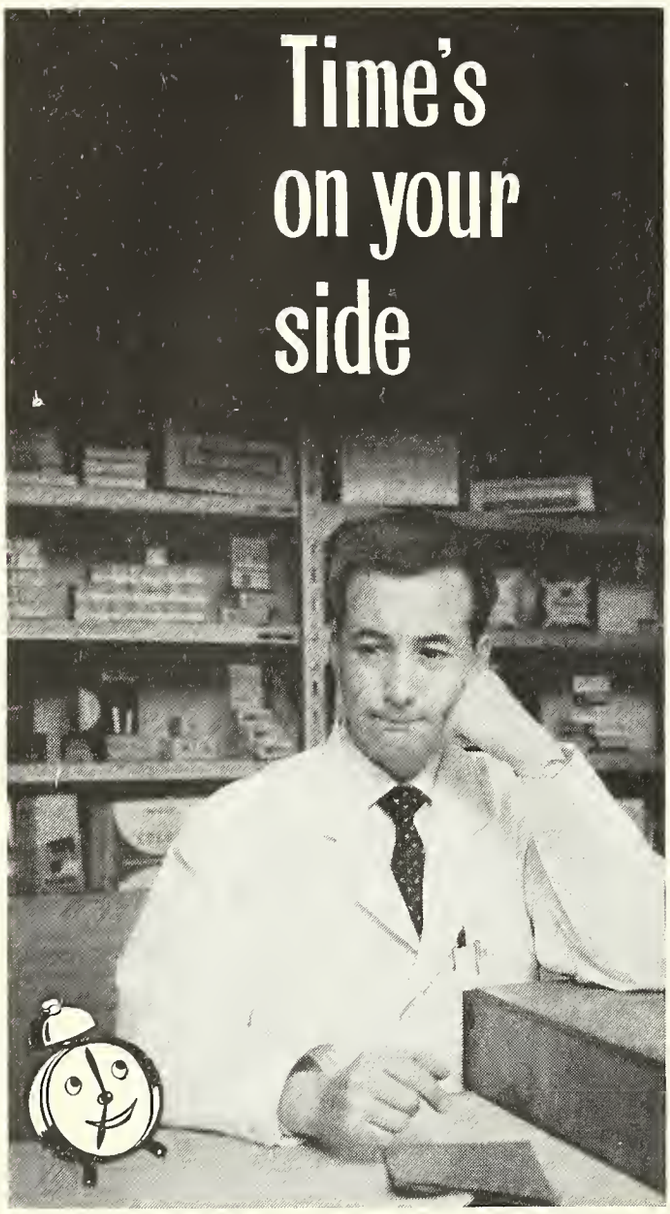
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PH 183

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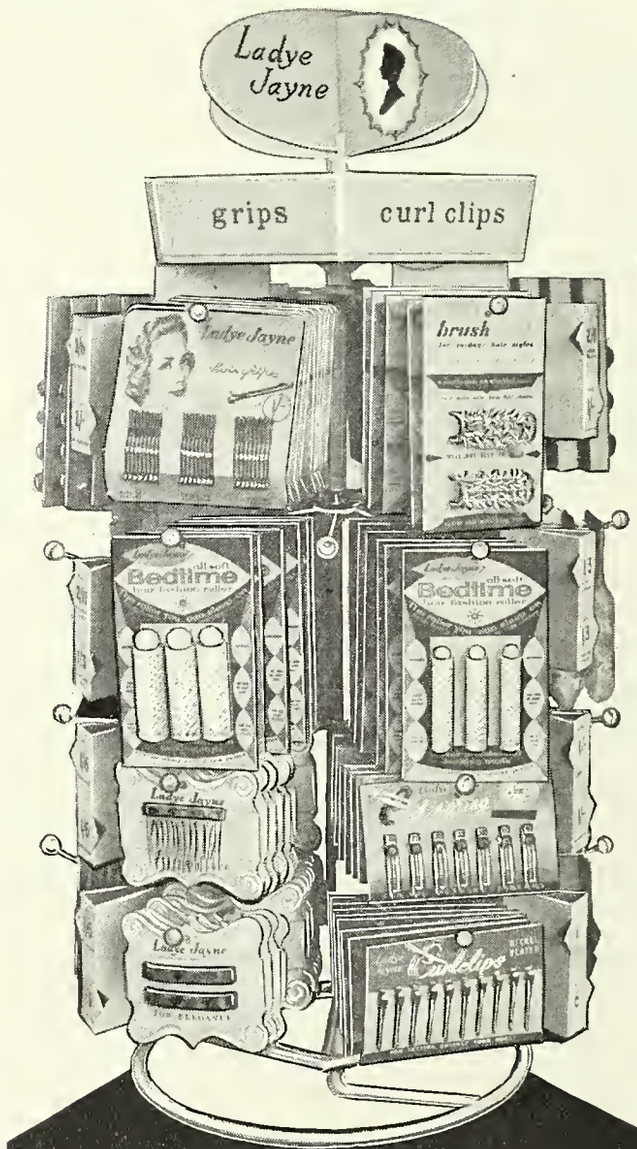
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Mid-Brown
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Trade Price 33/- per doz.
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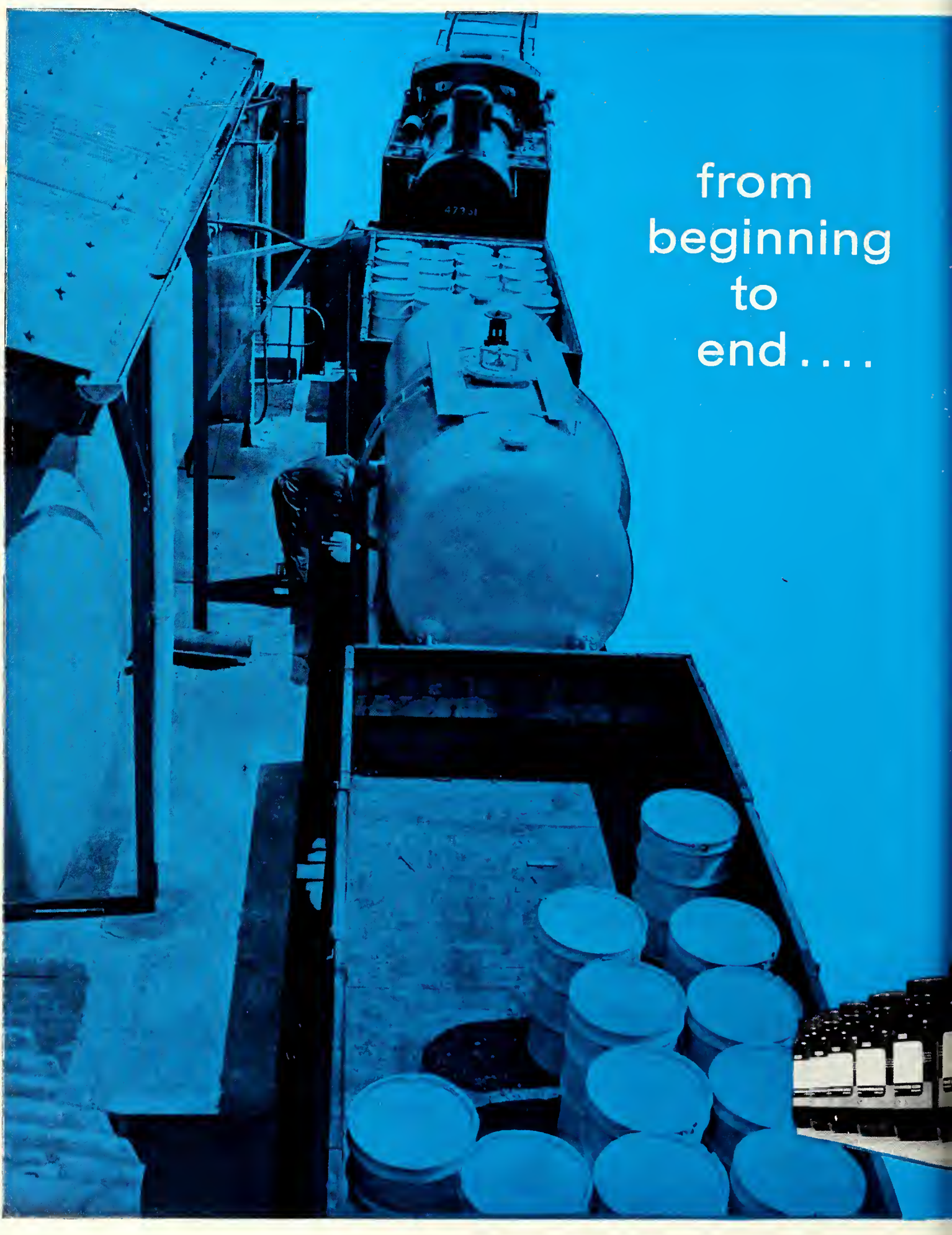
Get °Kolor-rite fluorescent lamps in 5-ft. tubes with BC or Bi-pin caps, or in 4-ft. tubes with Bi-pin caps.

Mazda °Kolor-rite lamps give the nearest thing to daylight

°Kolor-rite

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beginning
to
end....

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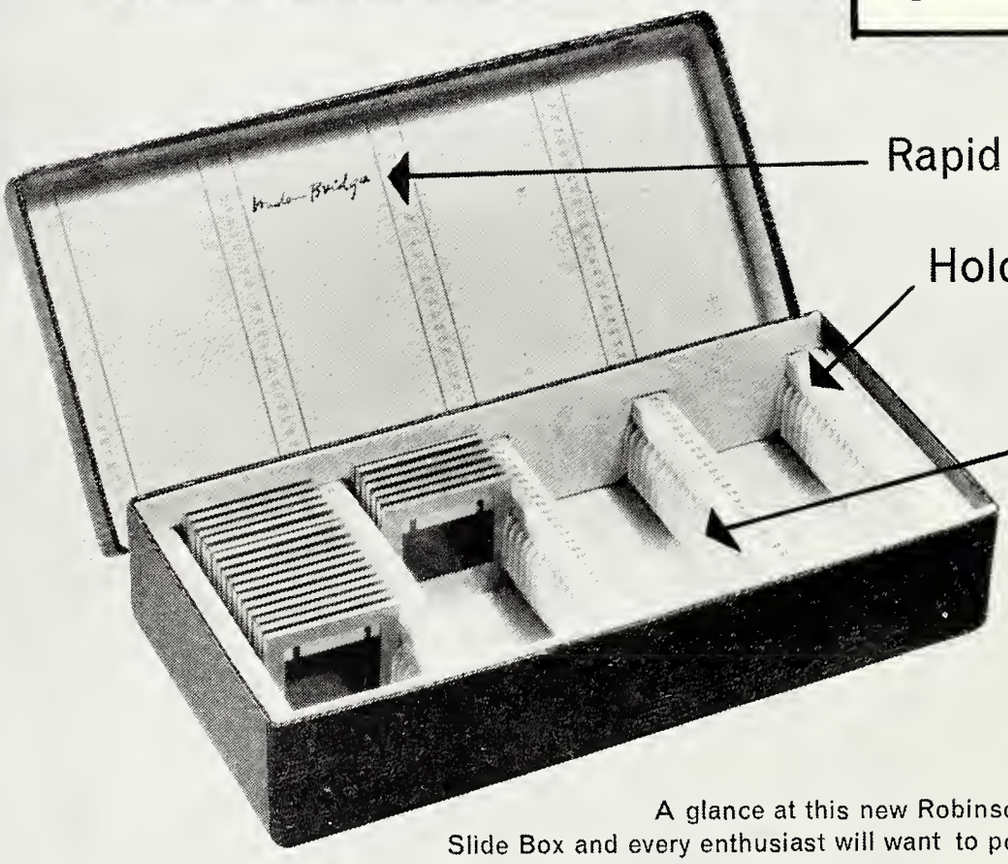
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And you will save time and trouble—
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OR-LEM SQUASHES (all flavours including NEW LIME-LEMON Squash,
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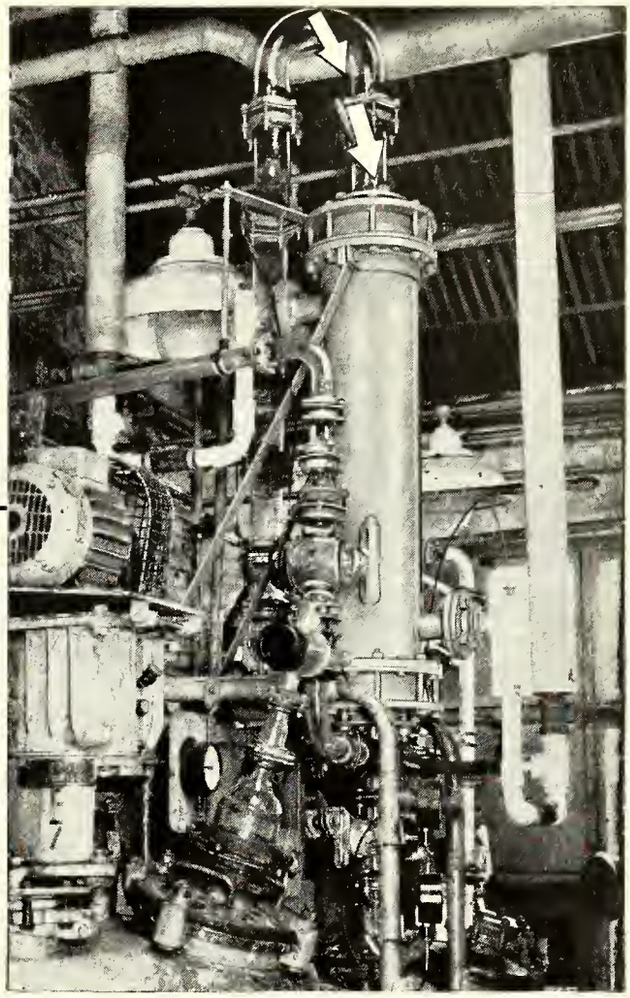


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CONFECTIONS
The sweets with a difference
Don't forget your supplies of
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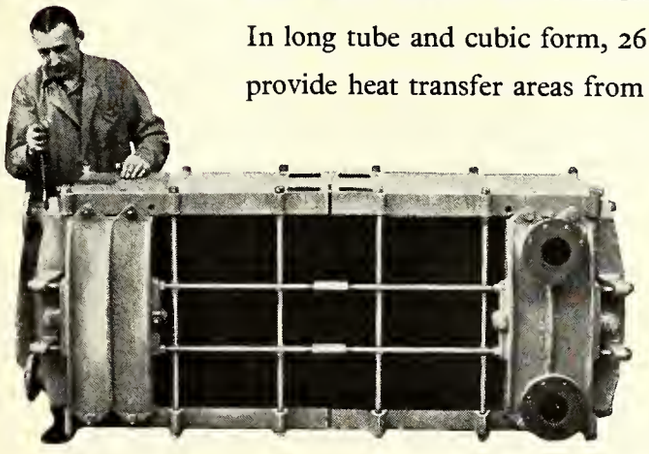
DELANIUM GRAPHITE BURSTING DISCS

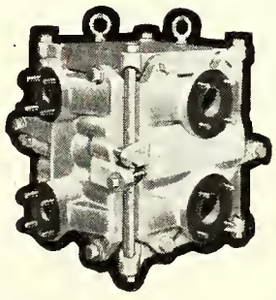
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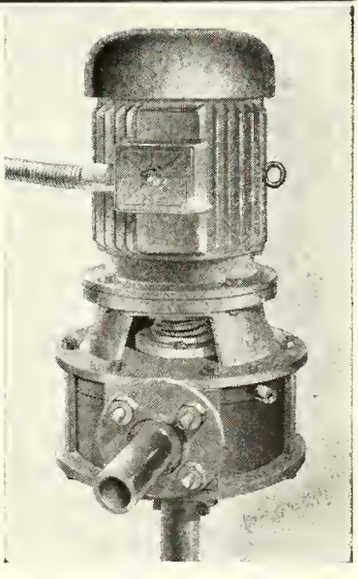
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IMPREGNATED LENS TISSUES

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"L.260" *Medicated* **SNUFF**

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RETAIL PRICES:
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OF DALE END, BIRMINGHAM

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It is necessary to have a Tobacco Licence to sell this preparation



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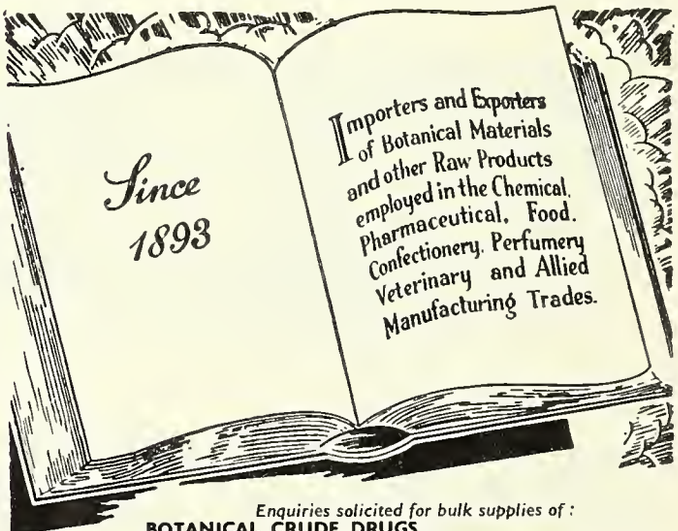
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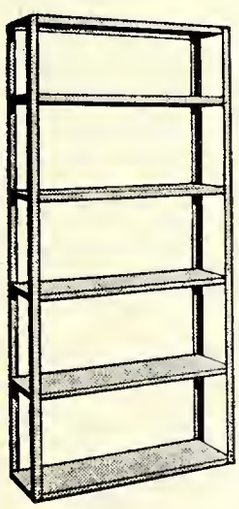
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7ft.	42"	12"	6	95/-	93/-	11/-

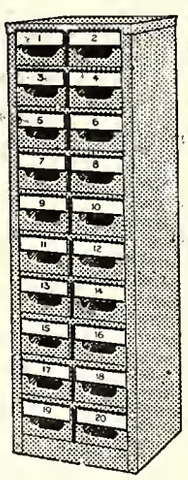
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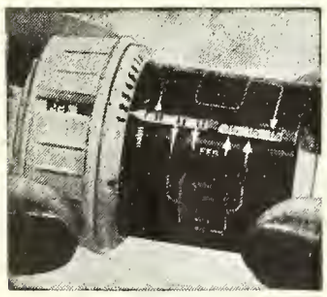
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AP 130



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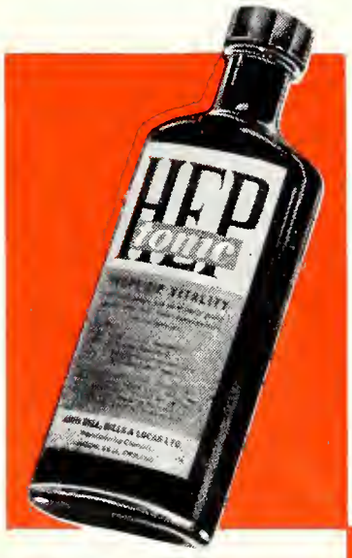
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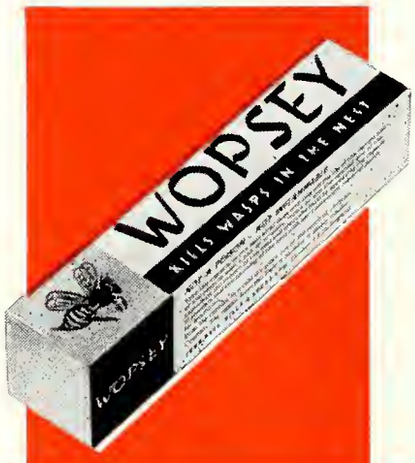
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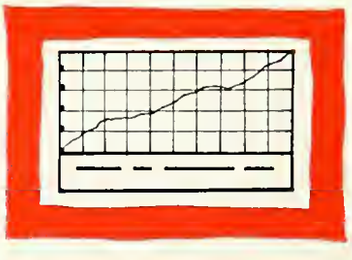
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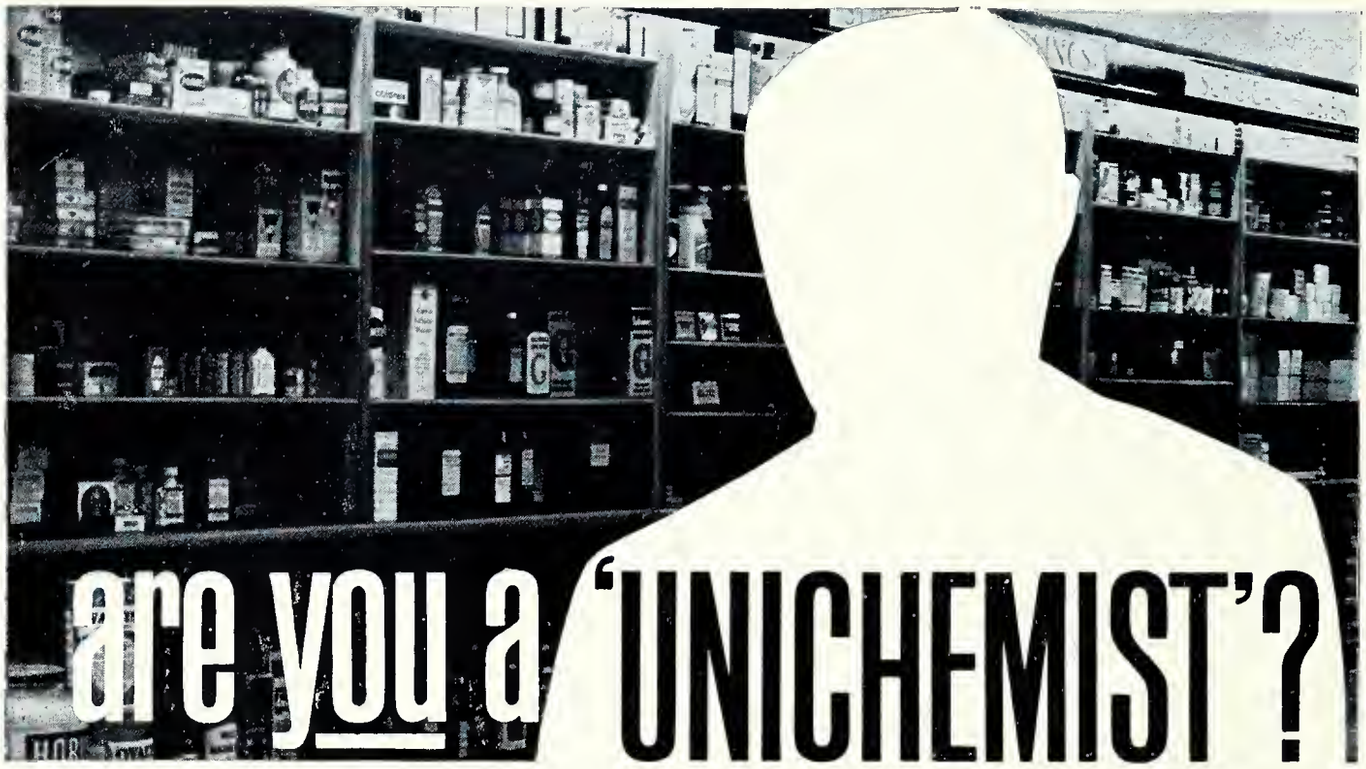


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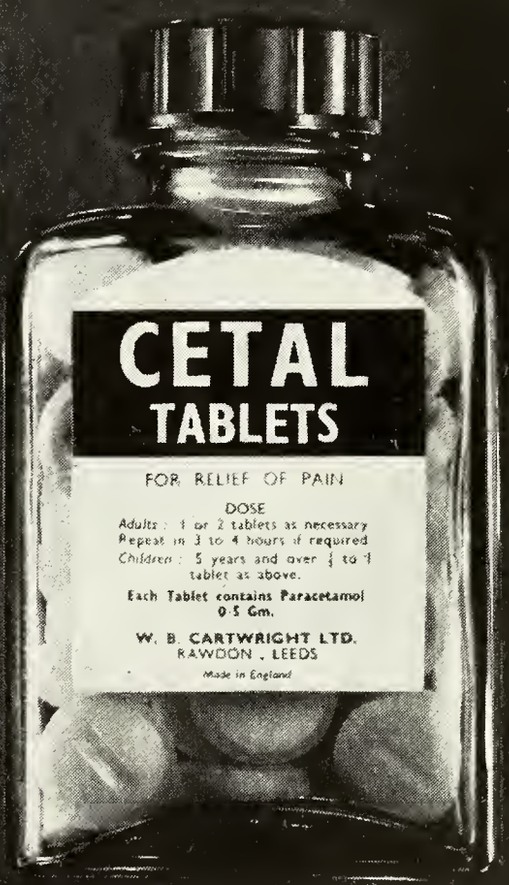
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IMPORTANT NOTICE

(Restrictive Trade Practices Act, 1956.)

The Proprietary Articles Trade Association has been authorised by the manufacturer members whose names appear below to give notice on behalf of each of them that each of them individually supply for resale proprietary articles, of a pharmaceutical, toilet or other nature, subject to conditions as to price, including a condition that they shall not be resold or offered for resale at wholesale or at retail at a price other than the appropriate price prescribed by each such manufacturer, plus the amount of purchase tax (if any) for which such products are liable.

Such conditions as to price are enforceable pursuant to the provisions of Section 25 of the Restrictive Trade Practices Act, 1956. An alphabetical list of the names of the proprietary articles referred to, with an indication against each name of its manufacturer or distributor, is printed in the List.

Particulars of the conditions as to price prescribed by the respective manufacturer or distributor for the proprietary articles enumerated may be obtained on application to the manufacturer concerned or his named distributor, or from the Association at 43 Gordon Square, London, W.C.1.

As indicated above, manufacturer members of the P.A.T.A. who attach price conditions to their goods are thereby enabled to invoke the remedies provided by the Restrictive Trade Practices Act for their enforcement, and the Association is able to assist them to use the legal facilities available for the purpose.

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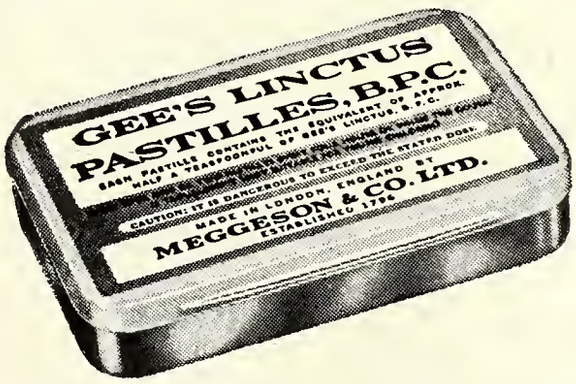
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Bonus Terms

THESE MEGGESON PRODUCTS





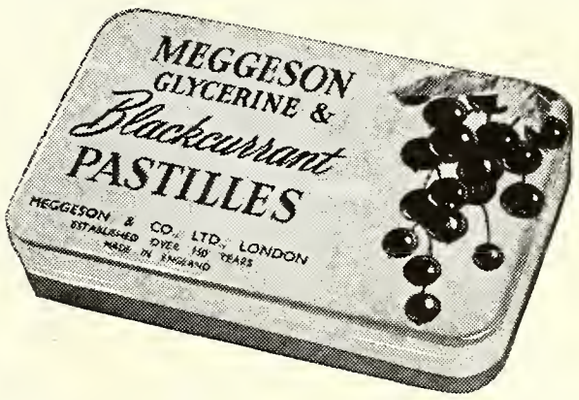
AND OTHER FAST SELLING





MEGGESON PREPARATIONS



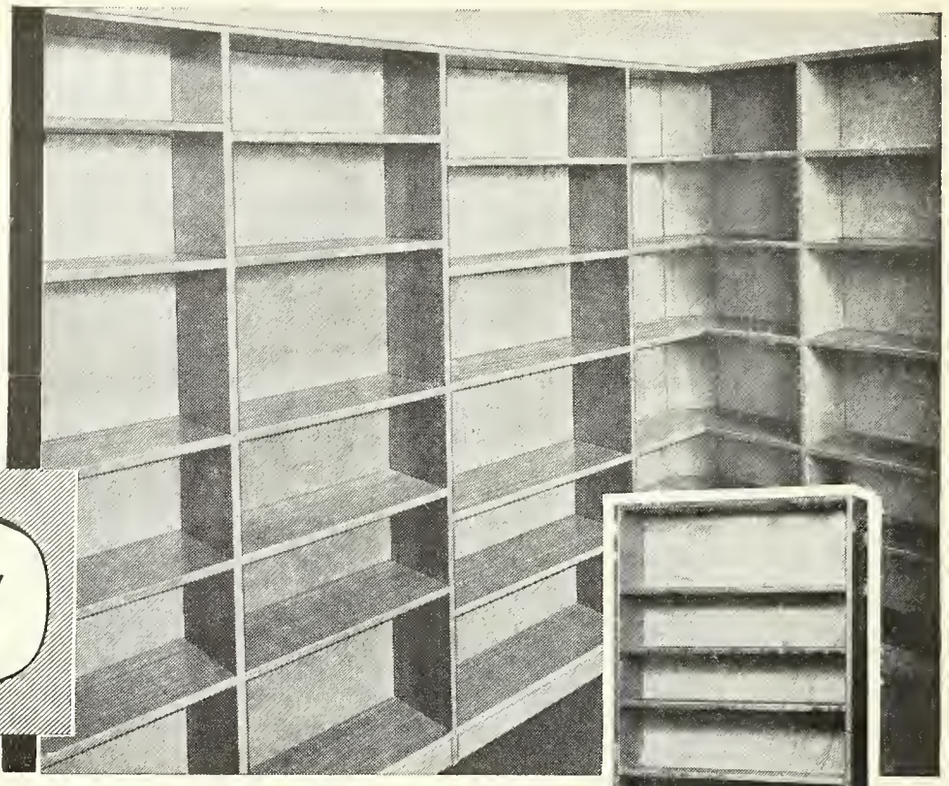


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Meggeson & Co. Ltd., London S.E.16

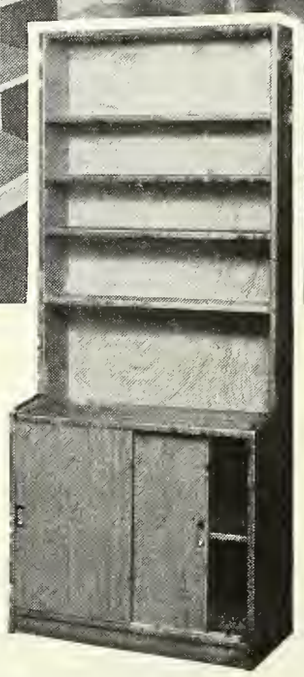
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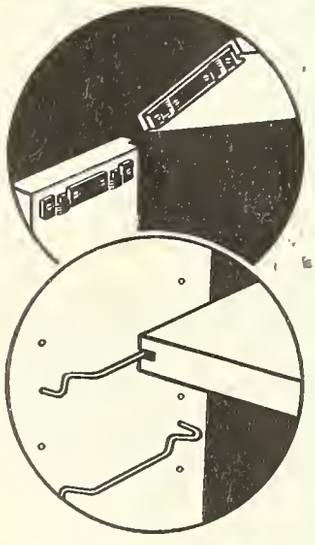
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shelving



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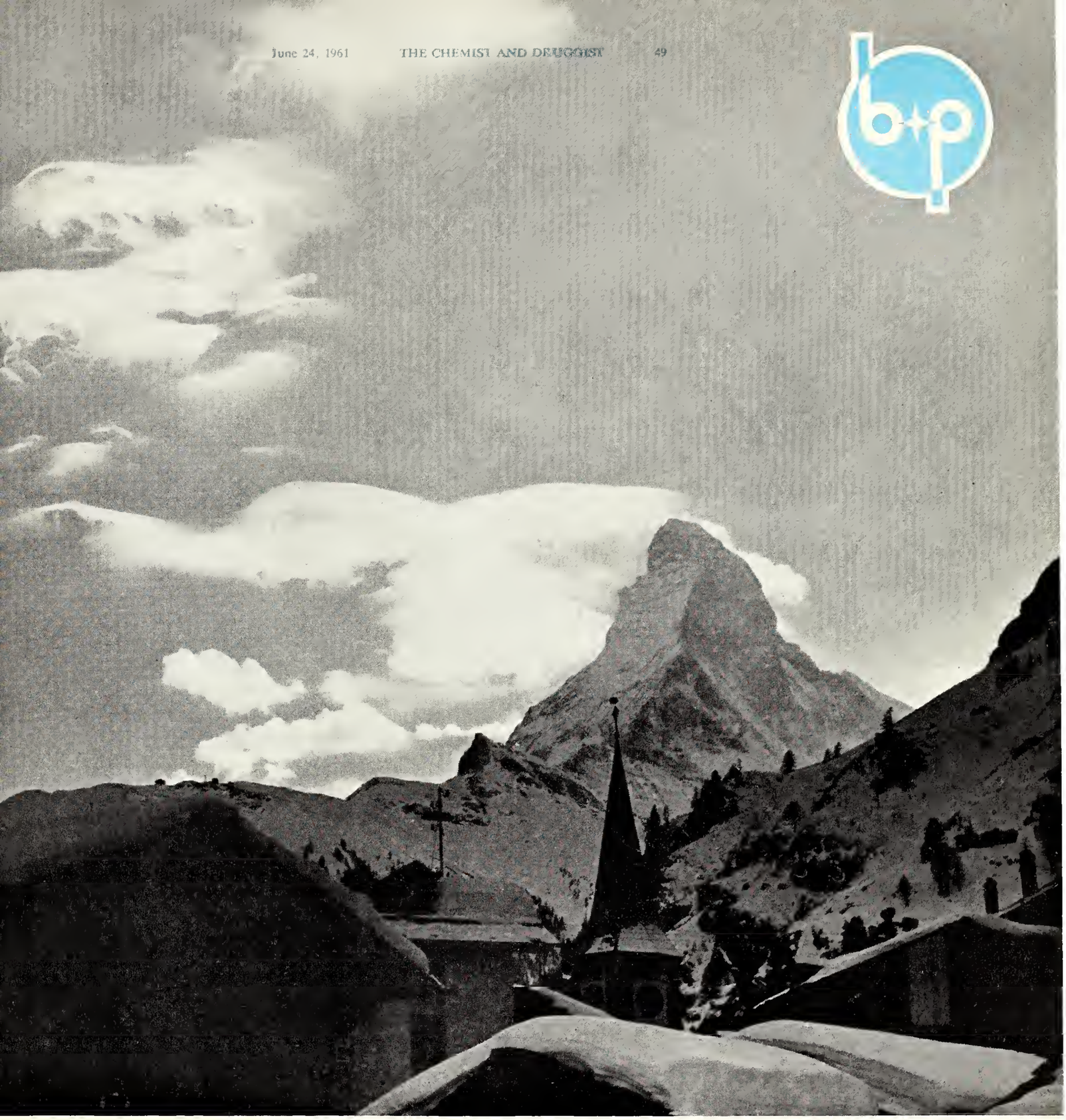
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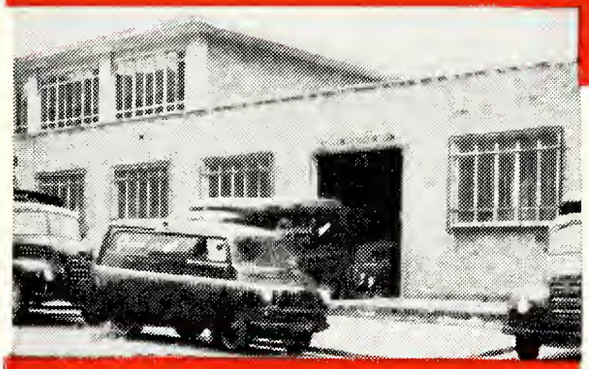
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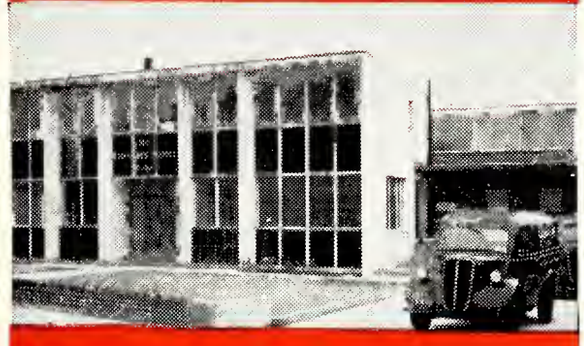
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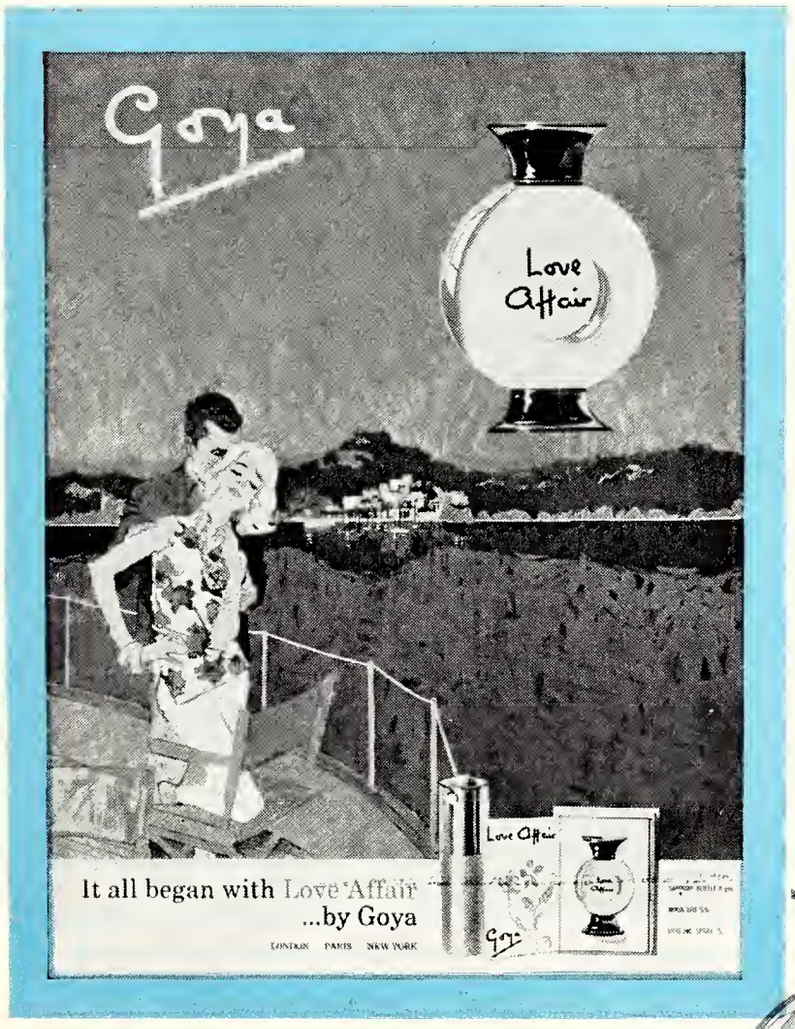
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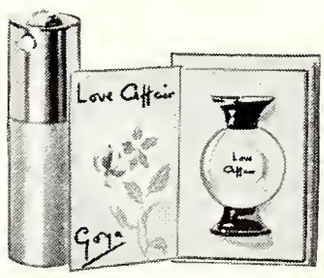
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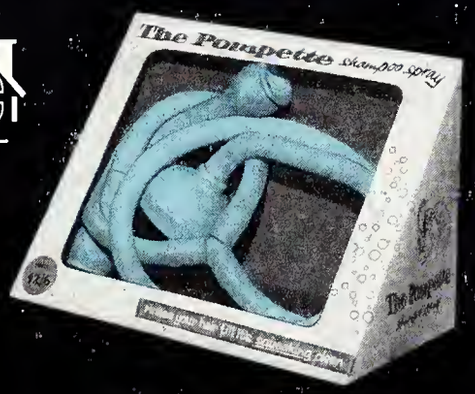
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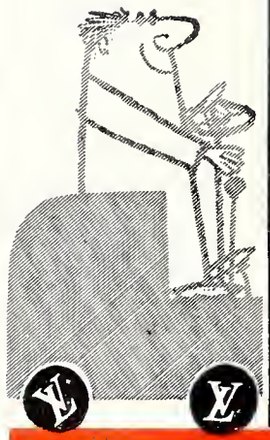
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